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CLINICAL MEDICINE AND SURGERY

GEORGE B. LAKE, M.D.
• *Editor* •

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VOL. 41 — SEPTEMBER, 1934 — NO. 9

EDITORIAL

Dr. James S. McLester

President Elect of the A. M. A.

ON January 25, 1877, in Tuscaloosa, Alabama, Nannie (Somerville) McLester presented her husband, Joseph, with a son, who was to make a name for himself for his service to Organized Medicine, and they christened him James Somerville.

After his elementary schooling, young James went to the University of Alabama, from which he received his A.B. degree in 1896, and from there to the University of Virginia, which made him a Doctor of Medicine in 1899.

Following a period as resident physician at the Polyclinic Hospital, Philadelphia, Dr. McLester went to Europe for graduate work, at Göttingen and Freiburg, for a couple of years, returning to Birmingham in 1903 to be married and to establish a practice as a consultant in internal medicine, along with his professorship (first in pathology and then in medicine) in the Birmingham Medical College, which he held until 1912. During these years he took another postgraduate tour, to Berlin and Munich, and was visiting physician and physician-in-chief to Hillman Hospital.

When the War came on, he was commissioned a major and made chief of medicine at Camp Sheridan. Later he was made a lieutenant colonel, A. E. F., and commanded Evacuation Hospital No. 20. He now holds a commission as a colonel in the Medical Reserve.

After the War, Dr. McLester became professor of medicine in the University of Alabama School of Medicine, which chair he still holds. His special interest is in problems on nutrition and he has written two books ("Nutrition and Diet in Health and Disease" and "Diagnosis and Treatment of Disorders of Metabolism") and many articles along this line.

During most of his professional career, the Doctor has been very active in Organized Medicine. Besides fellowship in the A. M. A. and in the College of Physicians (a regent since 1928), he is a member of the Association of American Physicians, the American Societies of Clinical Investigation and Tropical Medicine, the Southern Medical Association, and a number of other organizations.

In the American Medical Association he was chairman of the Section on Practice of Medicine in 1920 and delegate from this section in 1921 and from 1929 to 1933. In 1929 he was made a member of the Council on Medical Education and Hospitals, and in 1933 of the Committee on Foods.

Dr. McLester is a thoroughly sound proponent of all the policies adopted by the Association and, with his background of active organization experience, is eminently qualified for the high honor which has been conferred upon him.

Sick Insurance

WHILE, from boyhood, most of us have been taught that to carry insurance of various kinds is a prime duty of intelligent citizenship, we have been rather assiduously instructed, of late, that insurance to take care of the costs of unexpected illness is something inherently reprehensible and dangerous.

Most of us carry life insurance, fire insurance and, if we drive an automobile, public liability and property damage insurance; and many have maintained that without the last-named, no one should be permitted to operate a motor vehicle. And there are, of course, many other types of insurance which are widely sold.

Insurance of all types is merely the distribution of universal risks among so many individuals that their disastrous results are minimized for every individual. It is a practical modern application of the Christian precept, "Bear ye one another's burdens." If it is so useful, valuable or even necessary, in connection with so many of the vicissitudes of life, why does it become nefarious when entered into for the purpose of paying for medical care, at home or in a hospital?

Of course certain sick insurance schemes have been faulty, and even relatively good ones have been misused. Of course such an arrangement defeats its purpose when it is permitted to furnish a profit for someone other than the physicians who furnish the professional care and the patients who receive it, or when it pays a bonus for real or alleged disability, large enough to stimulate malingering; but those are criticisms of the way such plans have been administered, rather than of the plans themselves.

It would seem that such an arrangement could be worked out, on a local or even on a national scale, so as to be a benefit to all concerned. In fact, such plans have been successfully operated in certain localities and institutions.

It would seem that groups of physicians — perhaps such groups as are already organized into medical societies — could, if they would stop their bickering and "individualistic" rackets, suggest something that would be of real and permanent value. These pages are open for suggestions and discussions along these lines.

Whether we like it or not, the years ahead of us will not be like those behind, and the new society will be far more socially-minded than the old.

Instead of decrying any and all forms of sickness insurance, would it not be better to recognize that something of the sort is rather surely coming, to study the problem seriously and to try to steer the new course of life into channels which will be of the largest benefit to the greatest number of people?

The fundamental economic principle is that of maximizing utility and minimizing cost.—H. A. Overstreet.

Family Doctor — Model of 1934

WE hear a good deal of lamenting in certain quarters, most of which have the odor of academic halls and the abodes of specialism, about the "passing of the family doctor." A good deal of this is bunk. Of course, with automobiles and concrete roads, less physicians are needed per capita of population, for the care of the sick, because they can cover more ground in the same time; but all over this land thousands of medical men are ministering to the needs of their communities, as of old, and many former specialists are now doing all the general practice they can get hold of.

What is happening, however—and happening faster than ever, of late—is that the functions of the family doctor are changing, to meet new conditions, and those who are too deeply rutted or too thoroughly ossified to be reconstructed, will gradually be eliminated to make room for those of the new model.

Fifty years ago, the treatment given by a high-class general practitioner was (apart from major surgery) about as good as was available anywhere; typhoid fever kept many of the doctors busy in the summer and autumn, and diphtheria in the winter; there was little to do for people with "consumption" or cancer, except to make them comfortable until they died; and preventive medicine was little more than conceived in the womb of the future.

Today, typhoid and diphtheria are decidedly rare; the treatment of tuberculosis is largely conducted in sanatoriums; preventive medicine is a well-grown youngster and is occupying a constantly increasing place in the public thought; highly trained specialists are doing a number of things that the general practitioner, at his best, cannot do; and the treatment of certain classes of cases (such as obstetric patients) in hospitals and other institutions seems to be with us to stay.

What, then, are the specifications for the family doctor, model of 1934?

In the first place, he must be keen, capable, careful, courteous, earnest, energetic and well posted as to what is going on in the profession—he must be a regular and consistent reader of at least one, and preferably several, good medical journals, buy a good medical book every now and then and *study* it.

He must know something about psychology and psychotherapy, endocrinology and physical therapy, and have some apparatus for administering the last-named. He must know a great deal about diagnosis (including modern laboratory tests, even if he doesn't make them himself), therapeutics, preventive medicine and modern business practice. In fact, the lay public is now so widely (if not very accurately) informed about medical matters, that the successful physician will have to be on his toes to keep ahead of his patients.

The great coming field for the family physician will be that of health adviser and life counsellor to his patients, rather than merely the curer of their ills which are already in manifestation, and the sooner he starts to educate himself along these lines, the more certain he will be to reap the rewards of the foresighted.

The main lines of study he needs to pursue vigorously (in addition to what he already knows) are the niceties of diagnosis of *incipient* diseases and the means for combating such conditions (vitamins and general dietetics, endocrinology, personal hygiene, etc.); psychology and psychopathology (seventy-five percent of the patients he sees will show some psychic abnormality); sex hygiene and the technics of married life (erotology); and sociology.

As soon as he, himself, is convinced of the necessity for periodic physical examinations (health inventories) and is prepared to make them adequately, he must set about educating his patients along that line and selling the idea to them. It would, however, be the height of foolishness to create a demand for something he is unable to supply.

Personal neatness and poise, the courtesies of civilized life, kindly and sympathetic understanding and the ability to approach a patient in a businesslike but graceful manner will be increasingly important. An article on this last-mentioned subject appears in our pages this month.

Times have changed in the past generation, and unless the members of the medical profession voluntarily change with them, and *do it now*, the public is going to *force* certain alterations, and that process is liable to be unpleasant. We can do little to alter the course of events, but there will be plenty of enjoyable and remunerative work for all the family doctors who immediately set about reconstructing *themselves*, to conform to the new model of 1934.

Men who think are the only salvation of society, the only strength of government, the only bulwark of liberty, the only promoters of happiness and content.—W. G. SIBLEY.

Courtesy and Manners

THE social relationships between a physician and his patients are an important factor in his professional success, but one which is frequently overlooked or given insufficient weight. There have, of course, been medical men who became famous in spite of discourtesy and bad manners, but they are not a safe guide and example for the rank and file.

The cultivation of pleasing manners has, unfortunately, been looked upon with disdain by too many physicians, as a matter beneath their professional dignity, but this attitude can not continue, among those who aspire to occupy the front ranks in their fields.

Manners are, however, like morals, matters of time and geography, and unless one possesses something which goes deeper than superficial conduct, one must be always on the alert to keep abreast of the vagaries of changing social usage.

That deeper thing which, when once acquired, carries correct manners along with it as an inevitable corollary, is courtesy—that function of the *whole man* (not merely of the mind) which, like ethics, is fundamental and does not change with the passage of the years.

Civility is that minimum manifestation of friendliness, the absence of which constitutes the boor. Politeness is civility, perfect in degree and beautiful in quality. Courtesy is ideal politeness, combining the maximum degree of thoughtfulness and considerateness with the utmost of grace, beauty and dignity in their expression. Nothing short of perfect courtesy should content us.

These manifestations of friendliness are not hypocrisy, as some defenders of crude manners declare, for they express only those sentiments which we should entertain toward every human being and are the normal and suitable expression of any and every beautiful personality. Uncouth behavior is not, in most cases (as many like to believe), the result of manly independence, but is frequently a disguise for an inferiority complex.

Manners and morals, while not the highest

aim, are a worthwhile temporary substitute for something better, and should be cultivated during the period required for the development of those deeper and more enduring qualities upon which they rest—courtesy and ethics.

Manners can be learned out of books. Courtesy is a result of a life lived among people, approaching everyone in a spirit of love and helpfulness. Polished manners may admit one to "high society." The truly courteous man is welcome and at home in any company whatever (except that of the brutal and depraved) and enriches every social relationship and human contact.

The ideal physician will study, not alone the ethics of his profession (which, of late, have been rather prostituted to the level of mere morals), but also that all-embracing courtesy which raises us to the level of truly civilized men and makes us fit company for anyone—even ourselves when we are alone.

Tact is often as important as fact.—L. W. Rogers.

Hyperparathyroidism

THE symptoms of disorders of the thyroid gland are so marked and obvious that physicians in general are inclined to overlook the abnormalities of its anatomically associated organs, the parathyroids: yet abnormalities of these glands are not rare.

The symptoms of hyperparathyroidism are: Localized pain; backache; decrease in height; tumor formation; pathologic fractures; and the presence of hypercalcemia. All these arise from demineralization of the osseous system, and the x-ray demonstrations of this condition in the bones is the only sure diagnostic sign. Paget's disease and von Recklinghausen's disease are probably variations of this clinical picture, which, in general, may result from overactivity or tumors of the parathyroids.

A writer in this issue calls attention to an association between hyperparathyroidism and the syndrome of hay fever. This may be of importance.

When the roentgenologist studies these patients, he may find generalized or localized demineralization of the bones; mottling of the bones, as in *osteitis fibrosa sicca* (van Recklinghausen's disease); deformities, cysts or giant-cell tumors of the decalcified bones; pathologic fractures; or any combination of these.

Whenever a roentgenogram, taken for other purposes, shows compressed vertebral bodies, not accounted for by trauma or malignant disease, the entire bony system should be studied with the x-rays, with hyperparathyroidism in mind.

Those who will think of this condition and examine for it (including estimations of the blood calcium and phosphorous), whenever a patient presents himself with the symptoms mentioned, will every now and then make a diagnosis which will increase their professional prestige.

The only satisfactory treatment, in the minds of many writers, is surgical removal of the neoplastic or overactive glands. Many cures have followed this procedure. Perhaps a comprehensive regime of detoxication, as suggested by Dr. Northrup, may give some pleasing results in other types of parathyroid overactivity.

SONG THROUGH LEAF SMOKE*

Sword-blade rays of darkness falling
Straight from the edge of a purple world
Strike down the flames
Of the sumac and cut the strings
From the cricket's fiddle.
Autumn gold is a riddle
For misers. But something sings
Loud through the frost that tames
The weak ones; through sharp smoke whirled
When the sun faints and jays are calling.

G. B. L.

*From *Decimal*

LEADING ARTICLES

Rose Doe's Nose

(Nasal Plastic Surgery)

By Ralph St. J. Perry, M. D., LL. D., Minneapolis, Minn.

ROSE DOE is the sister of John Doe, who, as everybody knows, is a synthetic gentleman whose appelation is used by attorneys and court officers when referring to some male person whose identity is unknown. It is a bit of legal camouflage. For reasons which readily can be appreciated, the vast majority of those seeking cosmetic relief do not care to have their identities broadcasted, so, in this instance, the identity of the nose under consideration is hidden under the nom-de-plume "Rose Doe."

Here is what was done to Rose Doe's nose.

Photographs were first secured, showing the front view (Fig. 1) and profile (Fig. 2)—these as a matter of record, to show the "before and after" of the treatment, also to help in working out the details of the operation. The patient was informed that her profile could be changed either by inserting an implant, which would give her the appearance shown in Fig. 4, or the tip could be lowered, with a resultant side elevation as shown in Fig. 3. Without a moment's hesitation the latter operation was selected. Soon after this decision had been reached, the laboratory reports, covering urinalysis, blood count, hemoglobin, coagulation time and Wassermann reaction were received, all of which showed the young lady to be a fit subject, in every way, for any kind of surgical operation.

In performing operations upon the nasal septum, bear in mind that syphilitic persons are peculiarly subject to abscess of the septum and necrosis of the nasal cartilages and bones; therefore it is not advisable to initiate any cosmetic or plastic operative procedure involving those parts in the presence of a positive Wassermann reaction. Anemia and a slow coagulation time should also act as deterents to surgical operations of choice and should be overcome by suitable treatment and dietary measures.

In discoursing upon any surgical procedure, it is customary to review the anatomy of the parts involved, but in this case the field of operation is too limited and too familiar to justify a long description, and the whole matter can be readily grasped by a glance, if necessary, at Gray's or any standard anatomy.

The corrective procedure consisted of two operations: The first to lower the tip of the nose; the second to reduce the bulb.

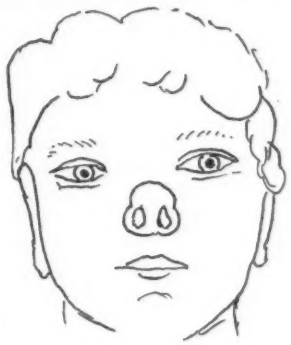

Fig. 1

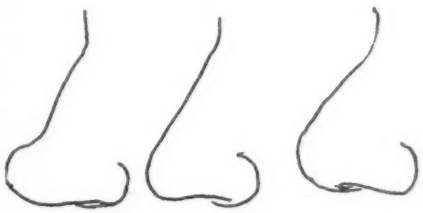

Fig. 2 Fig. 3 Fig. 4

Fig. 1.—Front View of Rose Doe's Face, Showing Appearance of Nose.
Fig. 2.—Profile of Nose Before Operation.
Fig. 3.—Profile of Nose as It Should Appear After Lowering the Tip by Shortening the Columella.
Fig. 4.—Profile of Nose as It Would Appear After a Cartilaginous Implant.

The First Operation

After cleansing and sterilizing the field of operation, local anesthesia is induced. The knife transfixes the columella at the upper part (Fig 5), cutting edge down, and the incision is carried down to the bottom of the columella. A horizontal cut is then made through the base of the columella, thereby creating a flap as shown in Fig. 6. These incisions are best made with a Von Graefe cataract knife or other long, thin knife having a straight cutting edge. If necessary an as-

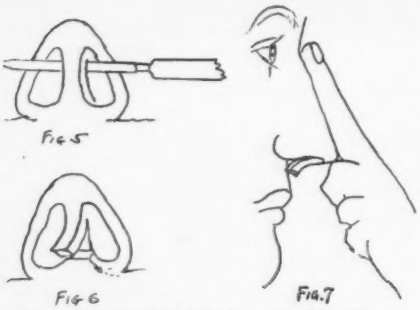

Fig. 5.—Making the Incision in the Columella.
Fig. 6.—Freeing the Lower End of the Columellar Flap.
Fig. 7.—Gauging the Length of the Columellar Flap.

sistant can slightly retract the alae during this stage of the operation. The tip of the nose is now depressed with the finger (Fig. 7) until the desired contour is secured, or as near thereto as possible, and that part of the columellar flap which overlaps the upper lip is cut away.

Do not grasp the lower end of the flap with mouse-tooth forceps and make traction. This is not an advisable method, as the traction on the tissues causes a stretching thereof and tends to create an altered proportion and relation of the parts when the traction is released. Too often it has been found that too much columellar tissue has been resected and the remaining flap is too short to give a satisfactory result when the parts are healed, there being an unnatural narrowness of the columella, with too great a depression of the nasal tip, and occasionally a postoperative drawing sensation in the parts, which may persist for months.

This may seem a minor detail, yet it is upon just such apparently insignificant details that the cosmetic success of an operation often depends. Our old friend Michael Angelo is credited with saying, "Trifles make perfection, but perfection is no trifle"—and Michael was some expert in matters artistic!

In a case like this, undue stretching of the parts causes: (a) Reduction in the caliber of the blood vessels (capillaries), with diminished blood supply which may threaten the life of the flap or cause delayed union, with the formation of a larger scar than desirable; (b) stretching of the nerves, which may result in postoperative neuritis; and (c) narrowing of the flap as a whole, which makes difficult an accurate apposition of the tense flap to relaxed other tissues.

Attention is next given to the nasal bones and the cartilages of the septum, which may or may not require a little trimming or shaving to conform to the new shape of the nose. Remember that the cartilage is the support of the bridge of the nose, that the contour of the bridge corresponds closely to that of the cartilage and that the removal of too much cartilage will result in a saddleback deformity. The cartilaginous tissue removed should be of an elongated triangular shape (Fig. 8), and so trimmed that there is a straight line from the root of the nose to its tip, without hump, depression or angularity.

Having fashioned the septal cartilage to fit the requirements of the case, the tip of the

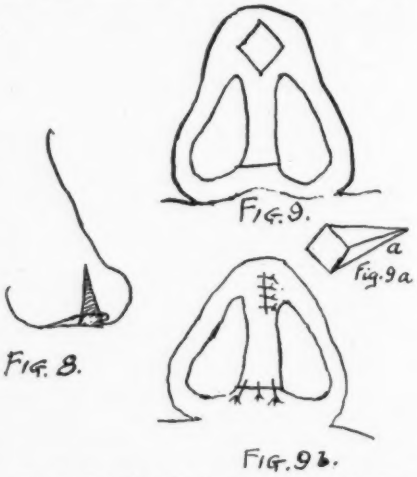

Fig. 8.—Reducing and Shaping the Septal Cartilage. (The Shaded Portion Is Excised.)

Fig. 9.—The Outlines of the Operation: (9-a) The Conical Piece of Tissue Removed: (9-b) The Operation Completed and Sutures in Place.

nose is now depressed as shown in Fig. 7, and the lower end of the columellar flap is brought into proper apposition and sutured in place, using medium dermal sutures, one on each side and one in the center front, but these are not tied. Three to five sutures, as needed, are now passed through the septum, behind the flap, but not tied. The ends of all sutures are held in small hemostats, one to each suture, until all are placed, when those at the lower end of the flap are loosely tied with the usual surgeon's knot and those in the septum tied with a *granny* knot. Leaving the first operation at this stage we now proceed to:

The Second Operation

Many methods have been devised for the reduction of the nasal bulb, and those which have proved most satisfactory in my work are illustrated herewith (Figs. 9, 10, 11). Operation "A" is the one most frequently used. As indicated in the illustration (Figs. 9, 9a, 9b) a pyramidal piece of tissue (Fig. 9a) is removed from the tip of the nose, the base of the pyramid being in the median line, square in shape and with two angles in

the median line (Fig. 9). The removal of this tissue creates an intraseptal cavity at the nasal tip, which is closed by sutures (Fig. 9b), aided by compression splints applied externally. The sutures, when tightened and tied, close the cavity by drawing the sides together laterally, at the same time narrowing the bulbous tip. This procedure may, but seldom does, cause a slight elevation of the tip, which may be immediately corrected by loosening the sutures at the lower end of the columellar flap (which were not firmly tied), slightly trimming and readjusting the flap to bring the tip into line. All coaptations having been completed and the cosmetic appearance being satisfactory, the various sutures are securely tied and clipped short. Figs. 9 and 10 show other types of incisions used for the same purpose, and Figs. 10 and 11a show the sutures tied.

Before tying the sutures in the septum, the granny knots are slipped and a suitable-sized, semi-cylindrical piece of soft silver, roughened on its convexity (Fig. 12), is placed over the anterior surface of the columellar flap. Experience has proved that, if the sutures are passed through the flap, or tied over it, the postoperative tumefaction of the parts often causes them to cut through the tissues, resulting in small, transcolumellar, ladder-like scars, which seriously detract from the cosmetic effect. To avoid this, some years ago, I devised the soft silver shield, which prevents the sutures from cutting into the skin. The several sutures are not cut short as they are tied, that being postponed until the final acceptance of the completed operation, as slight changes must frequently be made in the adjustment of sutures, in order to secure the most advantageous coaptation with a minimum of tension.

The operation field is now cleansed with a 1:4,000 solution of mercuric cyanide, dried and then painted over with Metaphen. The anterior nares are packed with gauze or with Simpson's nasal tampons. A veil of two or four thicknesses of pink or brown gauze is tied over the lower half of the face, *a la* the Mohammedan damsels, and the patient is permitted to go to her room. Colored gauze is used because it attracts less attention from the onlookers and also makes soiled spots less conspicuous. The wound is inspected daily and dressed as needed.

During the first twenty-four hours there is usually some oozing of blood and "wound juices." This is cleared away and the wound dried and painted with Metaphen. Very little attention is needed after the first day, and daily inspections are more of a psychoprophylactic nature than vulnerary. Sutures are removed on the fifth to seventh day, but

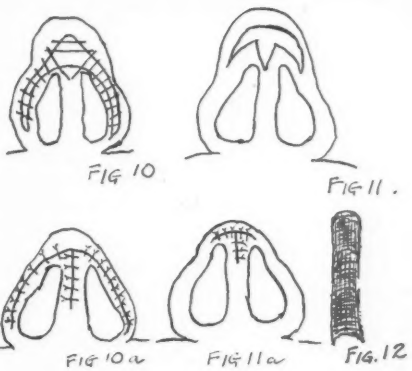

Fig. 10.—Outline of Operation. A Horse-Shoe-Shaped Piece of Tissue Is Removed. Sutures in Place: (10-a) Parts Approximated and Sutures Tied.

Fig. 11.—Outline of Operation, Showing Parts of Tissue to Be Removed: (11-a) Tissues Removed; Parts Approximated; Sutures in Place and Tied.

Fig. 12.—Guard to Prevent Sutures from Cutting Into the Columella.

the veil is worn two or three days longer, because of the apparently irresistible impulse of the patient (and others) to meddle with and handle the nose as soon as it is uncovered.

In selecting the operation best suited to a case, a study must be made of the characteristics of the individual nose—its size, shape, relation to other parts of the face, etc.—and, if the surgeon feels that he cannot bring about a cosmetic result satisfactory to both the patient and himself, it is far better to decline to operate than to leave behind a bit of discreditable work, which may proclaim his poor judgment or incompetence. Do not operate just because the patient insists upon it; in later years you will be mentioned as the operator and the patient's insistence will be concealed.

Advise the patient of your opinion, going into detailed explanations if necessary to make your position clear. It is a good idea to reduce this to writing and give the patient a copy. My personal experience is that, if the patient clearly understands the case, my advice is followed and the importunities of the solicitous, misleading and deceptive incompetents are of no avail. It is advisable to have the patient, parent or guardian sign a written consent for the operation, in which is embodied an acknowledgment of an understanding of the proposed operation, the fact that there is no guarantee of results, and of the surgeon's right to exercise his best judgment should any emergency develop during the course of the operation or after-treatment.

602 Nicollet Ave.

Practical Consideration of Essential Hypertension

By William Lintz, M. D., Brooklyn, N. Y.

Senior Attending Physician, Unity Hospital; Late Clinical Professor of Medicine, Long Island College Hospital

IN no disease is it so necessary for the physician to properly understand and correctly interpret all the symptoms of his patients as it is in essential hypertension. It is only then that the physician will know, not only when and what to do for his patient but, what is more frequently of even greater importance in this sickness, he will know what *not* to do.

Diastolic Pressure

While it is certainly important to know the systolic pressure in hypertension, it is even more important to know the diastolic pressure. Without a diastolic pressure man could not forsake his four-footed existence and assume the erect position. Rabbits suspended by their ears, with their cervical sympathetic cut (which results in the loss of the control of the diastolic pressure), die immediately from cerebral anemia, because all the blood gravitates into the splanchnic vessels.

A relatively high diastolic indicates a more serious condition than does a high systolic, and is less influenced by treatment. And yet, how frequently do I see physicians entirely ignore the diastolic pressure, being satisfied to register only the systolic. A high systolic, with a comparatively low diastolic, thus giving a high pulse pressure (the difference between the systolic and diastolic is the pulse pressure), is much more favorable than where the systolic and diastolic are both equally increased, giving a comparatively low pulse pressure.

A high diastolic leads to the loss of the elasticity of the large blood vessels and makes it harder to maintain an efficient circulation; but if the diastolic pressure is not above 100 and there is no advance of arteriosclerosis, a systolic pressure prone to rise easily need not disturb us. With a diastolic pressure of 80, a systolic pressure of 120 to 130 is required to maintain an efficient circulation. But where the diastolic pressure is 120 to 130, a systolic of at least 240 to 250 is required to maintain anywhere near an equally efficient circulation. From this it can be readily seen what a tremendous additional load an increase in the diastolic pressure places upon the heart, and how it endangers any diseased arteries, not only increasing the risk of cerebral hemorrhage, but also by limiting the oxygen supply to the tissues.

In aortic regurgitation and hyperthyroidism there is a comparatively high systolic and a low diastolic pressure. Foster and Palmer found that a diastolic pressure of 120 after rest means death at the end of two years, or else that the patient is in poor condition.

A diastolic pressure relatively high to the maximum indicates that, with increased resistance, the margin of the heart power is diminished. A high systolic with relatively low diastolic may be due to relaxation of the arteries and emotional heart excitement; that excluded, it points to some defective support of the circulation, such as impairment of aortic valves, regurgitation, and an extra demand upon the cardiac systolic pressure. Accentuation and reduplication of the second sound is seen with high blood pressure.

High diastolic pressure is the static high pressure, having to do with loss of cardiovascular balance, venous congestion and heart failure. If the patient is on the road to heart failure, the differential pulse pressure decreases much more quickly or rises much more slowly than the systolic pressure. To estimate the progression of heart failure, a knowledge of the pulse pressure is essential. High altitude lowers blood pressure; low altitude raises it. Therefore cardiac failure and cerebral hemorrhage are more frequent at the sea level than in the mountains.

The Heart

The heart, more than any other organ, bears the brunt of the increased blood pressure. Cardiac death is the most frequent termination of hypertension. In the United States, the most frequent cause of cardiac death has its origin in hypertension. In England it is rheumatism. Is it due to the hustle and bustle of America? I have seen, many a time, where the reduction of blood pressure is ascribed to a particular therapy when, in reality, it is due to cardiac weakness. The tracing in Fig. 1 shows the patient's blood pressure to be 190/110. She walked up and down and up again a flight of stairs containing 17 steps and her blood pressure came down to 160/95.

The action of digitalis upon the blood pressure in essential hypertension is quite paradoxical. I have seen digitalis raise the blood pressure where it is too low and, by strengthening a failing heart, lower it where it is too high, I presume by so improving the circulation and the blood supply of the cerebral vital centers, that there was no longer the

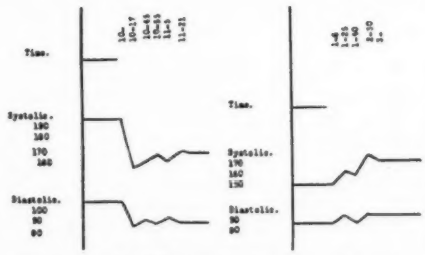

Fig. 1.—(Left) Effect on blood pressure of exertion, when the myocardium is weakened. *Comment*: Exertion weakened the myocardium and depressed the vis-a-tergo, hence the lowered blood pressure. (Right) Effect of rest upon blood pressure, if heart is weak. Blood pressure on arriving at office and walking up a flight of stairs, 150. Upon prolonged rest the blood pressure rises to 170 and does not come down. *Comment*: The weakened myocardium was responsible for the drop of blood pressure, which regained its vis-a-tergo under rest, and the blood pressure normal for the patient asserted itself.

need for the arteriole contraction throughout the body, in order to divert the blood to the brain. This results in a lowering of blood pressure.

With the exception of aortic regurgitation, where we find an increased systolic and a comparatively low diastolic pressure, thus giving a high pulse pressure, valvular disease of the heart plays no part in hypertension. In fact, in mitral regurgitation, we see, as a rule, a slight decrease in blood pressure. Probably the peculiar distress that precedes the appearance of dropsy in many heart diseases, especially mitral regurgitation, is associated with a high diastolic and relatively low systolic pressure. The onset of dropsy, relieving pressure and restoring the effective balance of pulse pressure, relieves this distress.

It is surprising to me to see how long hypertension can exist without cardiac enlargement. In hypertension occurring between 16 and 26 years, in very few cases (2 out of 16) was it possible for Moog and Voit[1] to demonstrate hypertrophy. There was no hypertrophy after five months of hypertension in one of their cases. I have observed for three years a boy who was 13 when hypertension was first discovered. He runs a systolic pressure of 180 to 200 and a diastolic of 80 to 110, and yet there is not the slightest sign of cardiac enlargement. I do not know the explanation. Can it be on account of the remissions which occur so frequently in essential hypertension? Or did he originally have a small heart which enlarged to a normal one?

In advanced old age, if blood pressure is gradually dropping, it is most probably due to gradual development of heart weakness, in spite of the fact that the heart shows nothing abnormal.

The reason why hypertension cases feel better with increased blood pressure than with it lowered, is because the physiologic response has been more vasoconstriction in some areas, and hence more blood volume shunted to areas where it is needed, particularly the brain and its vital centers, which then receive an adequate blood supply.

In coronary thrombosis and hypertension, besides the characteristic anginal pain and the pathognomonic but frequently overlooked friction rub, there is a rapid fall of blood pressure, which differentiates coronary thrombosis or embolus from angina pectoris. Infarction occurs and, since the left coronary is the one most often involved, it is usually the greater circulation that suffers and evidences cardiac failure, and hence the drop in blood pressure.

Kidneys

There are many who still believe that nearly every case of essential hypertension is caused by disease of the renal vessels. I notice that Christian, in "Oxford Medicine," describes hypertension in the same chapter as nephritis, although he apologizes for doing it. It is a fact, however, that, by employing the most delicate tests known to us, we fail to detect, at the beginning, the slightest kidney damage. Not only is the urine examination negative, but the blood chemistry, the concentration test, the Wasserbelastung probe, the employment of the various dyes such as phenolsulphonephthalein tests, etc., all indicate good kidney function. It is also a fact that, while the hypertensive patient suffering from kidney disease is pale, due to a secondary anemia, the patient with essential hypertension is ruddy, flushed and even plethoric, due to frequent polycythemia.

It is certainly not the lack of kidney substance that is the cause of hypertension.[2] In my experience I have come across a good many patients with only one kidney, and not infrequently that one was damaged, yet they showed no signs of hypertension. I have recently seen a patient with double polycystic kidneys; from one of the kidneys the surgeon removed 8 quarts of fluid and the other one was full of cysts. There must have been very little kidney substance left in both of these kidneys, and yet the blood pressure was only 140 systolic and 90 diastolic.

Excessive ingestion of protein, with supposed kidney damage, is said by some to be at the bottom of essential hypertension. The beneficial therapeutic results reported by some authors, derived from limiting to a minimum the protein intake, should lend credence to this hypothesis. But, unfortunately, these results are entirely in antithesis to common experience. Experimental feeding of animals on a pure protein diet gives rise to no nephritis nor hypertension.[3] The experience of the Arctic explorer Stefanson and his men, who lived for nine months on an

exclusive meat diet without the slightest ill effects, enjoying perfect health, would certainly explode any such hypothesis of the etiology of essential hypertension. I have never seen any benefit derived, in essential hypertension, from elimination of the ingestion of protein.

It is equally true that most cases of essential hypertension finally end with damaged kidneys, which are the organs most frequently involved; next comes the spleen; then the pancreas and the brain. I believe, however, that the spasm of the blood vessels of the kidney comes first and this causes vascular sclerosis, which in turn causes the kidney lesions. If essential hypertension is due to nephritis, why is it that so relatively few of these patients die a renal death? Anderson removed 70 percent of the kidney tissue of rabbits, and no hypertension ensued, even if prolonged kidney deficiency resulted.

Major produces hypertension with guanidin compounds, which produce slowing of the heart and decrease in the respiratory rate. These substances are normally present in urine.

The presence of anemia in hypertension, in the absence of explainable disease and loss of blood, is good evidence of existing or pre-existing renal insufficiency.

There is no hyperpiesis in fifty percent of the cases of arteriosclerosis. Hypertension is not particularly a disease of middle and later life, but exists more often than we imagine in the young, in a transient, intermittent or permanent form. It is due to over-excitability of the vasomotor nervous system and is a reaction to modern civilization.

When hypertension commences in early life the outlook is grave, for in such cases the constitutional factor outweighs the exciting factor, which latter is the more controllable. In the young the symptoms are the same as in the old.

Alcohol, Tobacco and Syphilis

Contrary to the usual impression, alcohol does not raise the blood pressure, but lowers it considerably, which effect lasts about 3 to 4 hours before it rises to its previous level. There is a momentary rise of blood pressure and then a considerable fall. Half an ounce of whisky will produce a drop of 60 to 70 mm. in the systolic and 10 to 20 mm. in the diastolic pressure, and the patients feel much better, on account of the conspicuous relaxing effect of the alcohol.

Aside from the objectionable features of alcohol in general and its effect on the kidney in this disease in particular, I do not see why a little whisky might not be given, especially if they are accustomed to it, in the old who are free from nephritis and arteriosclerosis, but who have hypertension. They sleep better and they feel better, because they are free from symptoms.

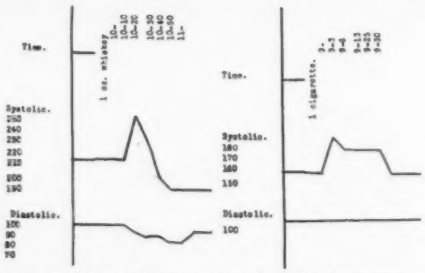

Fig. 2.—(Left) Effect of alcohol on blood pressure. (Right) Effect of smoking on blood pressure.

The effect of smoking in hypertension varies in different individuals. It either has no effect whatsoever, or causes a negligible elevation of blood pressure. Sometimes, however, the hypertensive action of nicotine is very marked, raising the systolic as much as 60 mm., which effect lasts for from 4 to 6 hours. Where it lowers blood pressure, it does so by depressing the heart.

I believe that syphilis is a negligible factor in essential hypertension.

Prognosis

The prognosis depends more upon the condition of the cerebral vessels, myocardium, coronaries and renal function, than on the height of the blood pressure.

Weitz and Lieben,[5] in 100 deaths, found that advanced cases of hypertension in fairly early life terminate from heart failure; in middle age, of cerebral hemorrhage. No case terminated in uremia.

Hypertension being only a symptom, like fever, of an unknown underlying condition, rarely needs to be singled out for attack. Of course, when there are threatening symptoms of cerebral hemorrhage or heart failure, then it is different. In fact, great discomforts and even fatal collapse may follow if this warning is not heeded. This is due to the fact that the brain, with its vital centers, is geared to do its work under a certain minimum blood pressure, which must be sustained in order to get enough blood for its proper nourishment and proper function.

Cerebral hemorrhages occur much more frequently in men than in women. In fact, my impression is that hypertension in men is generally much more severe than in women.

Summary

1.—To know the diastolic pressure is of greater importance than to know the systolic.

2.—To estimate the progression of heart failure, the pulse pressure is essential.

3.—Cardiac death is the most frequent termination of hypertension.

4.—A lowered blood pressure is frequently a detriment, due to cardiac weakness, rather than a benefit and due to therapeutic results.

5.—Hypertension in the young can exist for a long time before cardiac enlargement is seen.

6.—Nephritis is a sequence, rather than a cause, of essential hypertension.

7.—Hypertension exists in the young more often than we believe.

8.—Alcohol lowers blood pressure.

9.—Syphilis plays practically no part in essential hypertension.

10.—The prognosis of hypertension depends much more on the condition of the heart, blood vessels and kidneys than upon the mere height of the arterial pressure.

11.—It is unwise and rarely necessary to single out the symptoms of hypertension for attack.

12.—Hypertension in men is more severe and cerebral hemorrhage more frequent than in women.

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36 Plaza St.

The Use of Dried Fruits in Chronic or Secondary Anemias*

By George Alexander Gray, M. D., San Jose, Calif.

PERNICIOUS anemia and the socalled primary anemias are encountered rather infrequently in routine general practice. Secondary or chronic anemias, on the other hand, are exceedingly common. In this presentation I shall consider chronic or secondary anemias, not as diseases in themselves, but simply as conditions of the blood that result from the activity or deficiency of various agents.

Several main etiologic factors in the production of secondary anemia may be listed as:

1.—Hemorrhage, both acute and chronic.

2.—Infection, both bacterial and parasitic.

3.—Malnutrition and dietary deficiencies.

In this third group we may have (a) lack of iron for hemoglobin production; (b) deficiency of the socalled anemia-preventing "A. P." factors for the production of the stroma of the red cells; (c) both of these factors; (d) a defect in the power of utilization of the iron or "A. P." factor, because of some abnormal gastrointestinal function. (In group three we find a very large percentage of the individuals classified as chronic or secondary anemias.)

4.—Less frequent factors are metabolic diseases, such as diabetes and nephritis.

5.—Diseases involving the lymphocyte- and leukocyte-forming organs.

6.—Malignant tumors.

7.—Cardiac and circulatory disturbances.

Anemia has been a problem for years, and any adequate treatment necessitates the removal of the cause, whenever it is possible to determine it. Iron is the one inorganic element that has received the most attention from investigators, as it is incorporated in the complex hemoglobin molecule. In some form, especially if given in adequate doses over a long period of time, iron seems to be favored by practicing physicians above any other drug. Dietary factors, on the other hand, are only recently coming into study and appreciation.

The A. P. Factor

Literature, both past and present, on the treatment of anemias is enormous, and I do not wish to burden these pages with a review. The main object of this paper is to present a report on a series of clinical applications of the facts, published in 1925 and 1927, by Whipple, Robscheit-Robbins,[1] and others (who carried out their experiments on dogs), on "The Influence of Fresh and Dried Fruits in Blood Regeneration in Severe Anemia."

The essence of their early reports (1920) is that the feeding of liver and other foods to dogs that have been bled repeatedly caused a greater increase in red cells and hemoglobin than did any other procedure. An interpretation of these results is that an unknown substance, present in liver and some other foods, has the property of restoring hemoglobin and red blood corpuscle values in pernicious anemia. The experiments of Whipple and others have definitely proved the existence of this socalled "A. P." or anemia-preventing factor. They have further pointed out that the amount of iron in the various foods is not related to the amount of hemoglobin that will be produced by ingesting the food. The ash of various fruits and vegetables was found to be as effective in blood regeneration as the raw fruits and vegetables themselves. Whipple considered, therefore, that these various foods were valuable because of the combination of minerals, and not because of the presence of the chlorophyll nucleus, nor the vitamin, iron or protein content.

The nature of the effective substance is described by Whipple, in a personal communication, in the following words: "The chemical

*From the Medical Service, Santa Clara County Hospital.

1-Robscheit-Robbins, F.S., and Whipple, G.H., *A. J. Physiol.*, Apr., 1927.

nature of the material which goes to form hemoglobin in secondary anemia is probably complex. There are at least two groups of materials concerned: one organic, the other inorganic. The ash of liver or other potent substance contains about one-half the potency of the fresh material. We have been able to get fractions that contain but little ash which are high in potency, and presumably the organic factor here is conspicuous. I have no notion as to the chemical make-up, but probably it is a large molecule, as it is precipitable in 80 percent alcohol."

Minot and Murphy, in 1926, were among the first to make clinical application of the principle involved in Whipple's experiments, and reported their remarkable results in cases of pernicious anemia. The results of liver therapy (whole liver or liver extract) in pernicious anemia are well known to all and are obvious within two weeks, provided a sufficient amount of the liver is taken. The action in secondary anemia, however, is less striking and is frequently delayed for several weeks.

In secondary anemia we have a disease in which the hemoglobin pigment and relative pigment in the body may be completely, or at least largely, exhausted. The action of the anemia-preventing factor is thought to be that of rendering the hemoglobin more available. Since the A. P. factor, as well as the hemoglobin, is depleted in secondary anemia, a much more gradual response is to be expected than in the case of pernicious anemia. According to recent works, however, it is becoming the general opinion that liver (A. P. factor) is efficient in secondary anemia also, provided it is given in adequate amounts and over a sufficient length of time. The use of liver extract and iron, or ventriculin and iron (a combination of the A. P. factor and iron) has many enthusiastic and satisfactory reports in its favor.

From a dietary standpoint we know that iron may also be administered by means of food, and the quantity of iron in various foods, as indicated in the accompanying table, is of interest. The iron equivalent is expressed in milligrams per 100 grams of food, which amount is equivalent to about 3½ ounces. As a matter of added interest in regard to chronic anemia therapy, a table of vitamin contents is also included for comparison.

FOODS	IRON	VITAMINS A	B	C
1—Parsley	19.21	−	++	−
2—Dried beans average	9.5 to 11.5	−	++	−
3—Dried apricots	7.26	+++	−	++
4—Raisins	6.99	−	+	−
5—Spinach	6.6	+++	++	+++
6—Peaches (Fresh)	6.06	++	+	++
7—Prunes (Uncooked-dried)	5.7	++	++	−
8—Leaf lettuce	1.87	+++	++	+++
9—Canned tomatoes	1.3	++	++	+++
10—Orange pulp	0.42	−	−	+++
11—Orange juice	0.28	+	++	+++
12—Grapefruit	0.27	+	++	+++

Whipple's Experiments

Whipple's experiments on fruit were of extraordinary interest, because he found that many were quite potent in their possession of the A. P. factor, while others were inert. In some of his earliest anemia work on dogs he noted an unusually favorable reaction in treating anemia with dried peaches and apricots. Peaches, apricots and prunes were found to be most important; while raisins, grapes and apples were placed in a middle group, and berries and orange juice possessed practically no A. P. factor.

He found that the ingestion of 200 Gm. of the cooked fruit, daily, caused an increase of from 40 to 45 grams of hemoglobin per week, and that salts claimed an important part in the reaction effected by fruit and vegetables. He further showed that apricot ash contained almost all the potency of the fresh fruit. The experiments indicated to him that the dried fruits were just as efficient as the fresh fruits in the promotion of hemoglobin regeneration in anemia.

If we rate the hemoglobin production from liver feeding in standard anemia as from 80 to 100 grams in a two-week period, we find that apricots, peaches and prunes rate well up the schedule, as compared with liver; while spinach and cabbage are one-fourth as efficient; and orange juice, raspberries, etc. are almost inert. A list of the results of Whipple's experiments, giving the relative quantity of the anemia-preventing factor present, per 100 grams, or 3½ ounces, in some of the important food products, is as follows:

Beef liver	100%
Beef kidneys	90%
Chicken gizzard	85%
Chicken liver	75%
Apricots	40%
Peaches	40%
Prunes	35%
Apples	35%
Pancreas	30%
Heart muscle	28%
Spleen	25%
Bone marrow	25%
Raisins	25%
Peas	20%
Various types of greens	20%
Spinach	14%
Raspberries	0%
Orange juice	0%
Cereals	practically inert

All these reported experiments have been on laboratory animals.

Various authors mention that apricots, prunes and peaches should be included in all diets treating anemias, but I have been unable to locate any records or clinical reports of experiments carried out on human beings, where the anemia was treated from a dietary standpoint alone, using prunes, apricots or peaches as the sole addition to the ordinary

diet of the individual. With this in view, I wish to present a record of 146 cases treated in such a manner during the past two years.

Comments on Patients Under Observation

In 75 percent of our cases, which were treated solely by the addition to the diet of one-half pound of *dried* fruit daily, there was a definite approach toward normal in the erythrocyte count, followed later by a rise in the hemoglobin content of the blood. In 10 percent there was a moderate improvement in the blood picture; while 15 percent showed no apparent change. In this latter group there may have been some undiscovered causative factor, such as infection, which harassed the body cells so that they had difficulty in making hemoglobin out of new material; or perhaps the "intrinsic or unknown factor" of Castle, or faulty utilization power of the individual, was at fault.

In all cases of secondary anemia, active causative factors should be eliminated when found, and in most instances the anemia will spontaneously take care of itself. No case of anemia of this type, in which a definite etiologic factor was able to be determined upon, was included in our work. Our experiments were carried on in that large group of cases where the erythrocyte count lies between 3,000,000 and 4,200,000, with hemoglobin at 50 to 70 percent, and where all known etiologic factors had been removed. Cases of this type concern chiefly men or women who, for various reasons, eat little or no breakfast, take a hurried and inadequate "business man's" lunch, composed chiefly of concentrated starches, but who do partake of a fairly normal evening meal. These individuals frequently show slight anemia and often accompanying constipation. They complain that they are tired most of the time, that they have lost their normal pep and energy, and that they find their duties require greater effort to obtain ordinary results. Occasionally they may complain of some very slight symptoms of "indigestion and gas" which, in most cases when encountered, were found to be secondary to the constipation present. Such a class of individuals makes up the greater proportion of our series. Ninety-five (95) percent of our anemic individuals were females, 33⅓ percent being student nurses who volunteered for the experiment and were selected when their blood count fell in the desired group. If the indigestion symptoms were marked, gastric analysis and Roentgen rays were resorted to for further investigation of the patient; and if any possible organic basis for the anemia was found, that particular case was not included in our series. Achlorhydria or hypochlorhydria cases were not included in our experiments, but were treated by established and accepted methods. All blood examinations were carried out by the same two technicians throughout the experiments. Hemoglobin determinations were made with the Sahli or Hellige hemoglobinometers.

Objections to Anemia Therapy

Any individual who has been required to eat adequate amounts of liver daily, take liver extract or the liver extract and iron compound, knows that they are not always the most palatable preparations on one's menu. Then, too, we must always expect to encounter individuals who will refuse to continue using sufficient prescribed liver extract, etc., over a long enough period of time to produce the desired results. Iron, too, has its objections. In large amounts there may be either constipation or diarrhea, as well as the unpleasant taste. Finally, in many instances, the economic factor is an extremely important one, as liver, liver extract, etc. are rather expensive luxuries. Dried fruits, on the other hand, may be obnoxious to some few individuals, but not to the same degree as liver, liver extract compounds, or iron.

Summary of Results

The following opinions were formed as a result of our experiments:

1.—*The individual must take approximately one-half pound of the dried fruit per day.* This is equivalent to a fairly generous helping at each meal of any one of the fruits (apricots, peaches or prunes) or a mixture of all three. The fruit may be eaten fresh, dried, canned, cooked as in jam, or in desserts. In this series the same results were obtained with all three types of food: that is, apricots were as efficient as either peaches or prunes, and vice versa. Most patients enjoyed the apricots more than the other fruits, but apricots in large quantities have a tendency to cause loose stool formation in a few individuals. When loose stool is a factor, we have found it beneficial to decrease the quantity of fruit and give some mild astringent or constipating preparation of iron, such as ferrous carbonate or Blaud's mass. *If satisfactory results are to be expected we found it to be extremely important that the physician ascertain if the individual is actually taking the required amount of fruits daily.*

2.—Iron, such as Blaud's mass or ferric ammonium citrate, when administered in conjunction with the fruits, is supplemental in its benefit to the blood picture by raising the hemoglobin element more rapidly; while the fruits, when used alone, cause the the erythrocyte or stroma elements to precede the hemoglobin improvement. *The fruits, therefore, have the identical effect of liver, but to a lesser degree.*

3.—*The fruit must be taken over a sufficient length of time.* Results are rarely obtained in four to six weeks, and the best results require from eight to sixteen weeks. The reticulocyte response was rather slow and showed little variation from the normal. This is usually true in all cases where the erythrocyte count is 3,000,000 or more.

4.—In a series of 146 cases of anemia that had no definite etiologic contributing factors, so far as could be determined, and where the individual ingested adequate amounts of the fruit (one-half pound of dried fruit per day over a sufficient period of time—eight to sixteen weeks), there was a definite, efficient and economic return of the hemoglobin and erythrocyte count to normal.

209 Sainte Claire Bldg.

The Treatment of Diffuse General Peritonitis by Enterostomy

By W. M. Johnston, M. D., Akron, O.

IN the past few months I have had referred to me three cases in which I have had an opportunity to carry out the treatment I wish to describe. Although I am not proposing anything new, I am suggesting that perhaps this type of treatment is not carried out often enough. These three cases all had conditions sufficient to cause death; and the fact that they are all living is, I believe, due to this procedure.

Since the time of Hippocrates, no one has invented a medicine or surgical procedure that can be substituted for the one medicine, rest. In this discussion I wish to stress that one ideal of rest.

The superficial surface of peritoneum, with all its reflections, is an enormous surface, approximating that of the skin, which makes a large area for absorption. This accounts for the fact that we see such severe cases of toxemia early in acute diffuse peritonitis.

It is not the purpose of this paper to discuss the cause of death in peritonitis, but we are sure of two things: that septic peritonitis does produce death from toxemia arising from the causative infection, plus the products of the paralyzed intestine; and that these are the two areas where we can attack it at operation. In peritonitis the intestine becomes distended, its blood supply is lessened, its peristalsis is at first increased then is gradually abolished. The intestine is dying of its own efforts; in other words, peritonitis produces the same effect as intestinal obstruction, and we must relieve it.

Two things are required by the intestine: rest and a chance to empty itself. Both of these things may be accomplished by an enterostomy.

Dr. Blake, who is considered an authority on peritonitis, advises that an enterostomy should be performed in all cases where there is marked distension of the intestine, particularly if vomiting or paralytic ileus is present, and that it should be done at the primary operation. Personally, I do not think we should reserve the almost hopeless cases for trying this procedure, but we should use it in all cases where it is indicated, and I believe that is in nearly every one.

An excellent review of the literature of this treatment is found in *Archives of Surgery* for November, 1932.

In a review of this and all other literature available, I can find only three real objections to this procedure:

1.—Some critics state that patients possibly would have recovered without enterostomy. (Naturally no one can prove that.)

2.—It takes time, and the time involved in a very critical case might be the reason for death. (It actually takes about ten minutes to perform an enterostomy. I do not believe that this length of time ever caused the death of a patient.)

3.—It requires a second operation. (This we found not to have been true, as in two of the cases I am reporting we were required to do a second operation and the area of enterostomy could scarcely be located. Thus it would seem there would be no real objection to performing this operation.)

Technical Suggestions

When an abdomen is opened in a case of diffuse suppurative peritonitis, several problems arise for the surgeon. They are based simply on the fact of providing rest to the part, removing the causative infection and giving the right aid to the patient, so that he may recover.

Very little handling of the contents of the abdomen is indicated. We have all seen death caused by too enthusiastic exploration. Allowing any of the intestinal contents to enter the abdominal cavity is the same as signing the death warrant.

Sponging the abdomen and washing it out with saline and other fluids is contraindicated. The trauma does more harm than any good it can accomplish.

The cause of the peritonitis, whether it be an appendix or perforated viscus, should be sought for quickly. If an appendix, it is removed; if it is a perforation, it is closed. The peritoneal cavity is best cleansed by a well protected suction apparatus, which can be placed near the area of the cause, and fluid and pus quickly and efficiently removed. There should be no evisceration of the abdominal organs.

There is probably no more important question in the treatment of peritonitis than

how and when to use drainage. It is my opinion that, not only in peritonitis, but in all surgery, there has been too much rather than too little drainage done, and we are gradually getting away from it.

In the first place, it is impossible to drain the entire abdominal cavity by drains placed in the pelvis, even with the patient placed in an extreme Fowler's position, as is often proved by the formation of residual abscesses in the abdomen so drained. In the second place, drains act as foreign bodies and cause peritonitis to continue, at least in their vicinity, which might resolve if they were absent. In the third place, except in regions in which adhesions are prevented from forming by necrotic fibrin, drains become isolated in a very few hours.

When multiple drains have been used, the mortality has been higher and there have been more residual abscesses than when drainage has been omitted. On the other hand, drainage must be employed when there is necrotic material which might make a nucleus for another inflammatory process, or when there is bleeding or when the closure of the perforation may not be secure. In such cases, the drain should pass only to the region involved. The best size for draining tubes is ⅜ inch or No. 30 F.

A satisfactory axiom is that drainage of the cavity should be omitted when, after removing the cause of the peritonitis and cleansing by suction, no one part of the peritoneum appears worse than the other.

A small portion of the distended, darkened intestine should be selected and an enterostomy done. This is best accomplished by the technic of Witzel.

Thus, briefly, the operative treatment is gently and quickly to remove the cause of the peritonitis; cleanse the peritoneal cavity by gentle but efficient suction; drain only to the area of the causative infection; and perform an enterostomy as described.

When the patient is returned to bed the treatment really starts. As soon as possible the patient is placed in Fowler's position. If an adult, morphine ¼ grain (16 mgm.) is given every four hours. Nothing is given by mouth, but a continuous intravenous drip is started, following the suggestions of Mattas. Accurate measurements of the fluid intake and output are recorded. A careful check is made for diminished chlorides and the appearance of acetone and diacetic acid in the urine. If any of these are discovered they may be controlled by the proper change in the intravenous fluid.

These patients take nothing by mouth for four or five days, or until peristalsis has returned. Fluids are not given by rectum, as this method is unsatisfactory and the amount that can be retained is small. No flushings are given, as they accomplish nothing except to disturb the patient. In other words, the cardinal principle of rest is kept in mind.

No cardiac stimulants are given, as caffeine and similar drugs have caused more deaths than they have prevented. In fact, outside of the suggestions made, the patient is left alone as much as possible.

The enterostomy tube is left unclamped and may be irrigated every few hours, if not draining well. As soon as fairly clear contents, without odor, replaces the turbid, foul return which is obtained at first, the tube may be used for the introduction of salt solution and other fluids for nutrition, if desired. From the sixth to the tenth day the tube will come away and the tract will close shortly after.

If this routine is followed, the day after the operation one will be surprised to note the appearance of the patient. He will stop vomiting, the anxious look will have disappeared from his face, the pulse and respiration will be slower and the evidence of toxemia much less.

Case Reports

The first of the cases I wish to review was that of a female 23 years of age, who was referred to me by Dr. J. M. Canter. This patient gave a history of having been ill for approximately four days previous to the night when she was seen by Dr. Canter. Her past history was essentially negative. At the time of our examination the patient had a very weak pulse, with a rate of 110, and a temperature of 101°F. She appeared very ill, with the anxious expression seen in these cases.

Her abdomen was distended and rigid, with generalized tenderness. A diagnosis of "acute abdomen" with peritonitis was made and patient was sent to the hospital.

At the operation, a gangrenous, perforated appendix was found and generalized peritonitis was present, which was not walled off in any way. Pus was scattered through the entire abdomen. The coils of the ileum were distended, darkened and somewhat adherent. The appendix was easily isolated and removed, at least a pint of pus was removed from the abdomen by the suction apparatus and one drainage tube placed in the region of the cecum. Then one of the most distended loops of the ileum was taken and an enterostomy was done by the technic of Witzel.

Upon return to bed, this patient was given an intravenous drip, placed in Fowler's position, morphine given every four hours and the usual treatment for peritonitis that we suggested was followed.

The patient was in a very critical condition on return from operation. However, the next day the enterostomy tube was draining and she looked better. The rigid treatment was kept up and the patient improved so that, after four days, we started giving fluids by mouth, although she had already taken 11,000 cc. of fluids intravenously and by hypodermoclysis.

The enterostomy was treated as suggested

previously and the catheter was removed on the seventh day. This patient went on to recovery and was discharged from the hospital when completely healed on about the twenty-ninth day.

In the second case, that of a female aged 23, referred to me by Dr. A. E. Errington, the patient had had a criminal abortion performed about one week previous. When I saw her she had a much distended abdomen, rapid pulse and fecal vomiting. Her abdomen was hard and the prognosis was not good. Peristalsis had slowed, no results could be obtained with an enema and fecal vomiting continued every few minutes.

The diagnosis of general peritonitis, with ileus and probably obstruction, was made. Under spinal anesthesia her abdomen was opened. A large, boggy, infected uterus was discovered and general peritonitis with ileus was present. There was considerable pus and fluid in the pelvis and, on examining her abdomen, we could hardly give the patient a chance for recovery.

The pus and fluid were removed from the abdomen with a suction apparatus and one tube was placed in the posterior cul-de-sac. A loop of distended and darkened ileum was taken and enterostomy was performed by the technic suggested, the tube was brought out through a small stab wound in the abdomen, and the post-operative routine began.

We were much surprised by the appearance of this patient the next day—she was much improved. She was allowed to take fluids on the fifth day, the tube was removed on the tenth day and the opening closed spontaneously thereafter. In the postoperative treatment this patient was given two blood transfusions, and 20,000 cc. of fluid was given by vein.

At about the time of her discharge from the hospital, she developed a secondary obstruction. Upon opening the abdomen, we found a loop of the jejunum adherent to the upper part of the former incision. This was easily released and the patient made a good recovery.

This second operation should be of interest because the fact that the area where the enterostomy was done could not be identified, showing that the claim, by some critics, that a second operation is necessary, is not true.

This patient was discharged after her second operation and is in good health today.

The third case was that of a white male, 33 years of age, who was referred to me by Dr. Gibson. This patient gave a history of having been treated for a gastric ulcer for fifteen months. He had had various abdominal pains and his abdomen had been distended for several hours. Three days before admission to hospital his pains were much more severe than usual and he remained in bed.

About eight hours previous to his admission he had a sudden, severe pain in his abdomen and was finally persuaded by his physician to go to the hospital. On admission, he had a slight distention and almost board-like rigidity of the abdomen and a temperature of 98°F. We thought we were dealing with a perforated ulcer, so the high incision of the right rectus was made and, when the peritoneum was incised, a large amount of fluid was found. We removed this fluid with the suction apparatus. On examining the stomach and duodenum no evidence of perforation was found. There was a marked general peritonitis, which extended almost to the diaphragm, with loops of the small intestine very much distended and darkened. The region of the cecum was examined and a gangrenous, sloughing appendix, with hardly more than the serosa left, was found. This was removed. A tube drain was used in the region of the appendix. Other free pus was removed by suction. An enterostomy was done by the technic described. The abdomen was closed and the patient was returned to bed with a seemingly grave prognosis.

He was put upon the routine described and, during his postoperative care, 24,000 cc. of fluid was given intravenously. He developed a hacking cough the next day, and this continued during his stay in the hospital.

The tube was removed on the ninth day, and that evening I received an emergency call, that his incision had opened. We resutured his abdomen and he recovered from even this ordeal, but the most interesting thing was that, though the enterostomy tube had been removed only 12 hours previously, one could scarcely tell where it had been—again proving that second operation is not necessary.

I am told by the referring physician that this man is in good health today.

In conclusion, I wish to state that, in treating diffuse general peritonitis, if, in addition to the regular treatment which I have suggested, the performance of an enterostomy, in the manner mentioned, is done, we may often hope for life in many cases which, on first examination, usually and rightly will be considered hopeless.

Metropolitan Bldg.

FEAR OR FRIDAY

There are some who are so fearful of what may happen on Friday the 13th that their nervousness may cause them to step on the gas at the wrong time, to look backward as the traffic signal changes or to give the baby sour milk instead of the bottle that was prepared for him. It is fear and not Friday—thoughtlessness and not the 13th—that make the trouble.—Dr. Otis W. Caldwell, *of Columbia University.*

Positional Urination in Prostatic Hypertrophy

By James A. Dungan, M. D., Greeley, Colorado

THE purpose of this paper is to set forth a simple method to provide improved drainage of the urinary bladder, with resulting asepsis of that organ, and relief from the vicious round of nocturnal urinations, in hypertrophic disease of the prostate gland, in cases where the urethra is still open.

When man started walking upright, drainage in several parts of his anatomy began to fail noticeably—that is, it is to be assumed that it did, because now we have what would constitute a logical evolutionary result of such a failure. The pelves of his kidneys, for instance, no longer emptied completely, as formerly, into the ureters, for the reason that, as he stood and walked vertically, the lower half of each pelvis was below the rim of the ureteral opening.

Colonic drainage was not so good either. In man's newly assumed position, when the small bowel had extracted all possible of the food value of it's contents and had emptied the residue into the cecum, the latter's directional flow would now be up-hill for a time. The stool was now more or less hard and molded and so, despite the presence of the appendix, which secreted more or less mucous, constipation supervened and has remained to this day. Matters were not so bad with the urinary bladder until the evil day when, with advancing age, the musculature of the bladder relaxed and the urine was not all expelled. The neighboring prostate gland became irritated and, enlarging upward, constructed residual urinary sacs (See Fig. 1), which were the beginning of the long train of symptoms, such as nocturnal urinations with feeble and interrupted urinal flow, cystitis, phosphaturia, pyuria, pelvic and supra-pubic pain, decreasing bodily vigor from loss of sleep and rest, increasing blood pressure, and finally septic cystitis, myocarditis and death.

The method which I propose, as a simple relief and possible cure for many of these cases, is one which I have been suggesting (to patients having demonstrable prostatic enlargement, with more or less of the aforementioned symptoms) for the preceding ten years, and with almost uniform success *so far as it's intention goes.*

It is, briefly, this: Impress upon the patient that he must take enough time to urinate to be absolutely sure that every drop of urine which can possibly be expelled at the time of urination is ejected before he leaves the toilet. Direct him to lean forward over the toilet at an angle of about thirty degrees to the vertical position, with the slant being one of the *whole body,* rather than only from the hips upward and forward. The body from the hips up slants at a little sharper angle than from the feet up.

Warn him that there will be stopping and starting of the flow and dripping, but that he must patiently wait until the last drop is ejected, which may be assumed to have happened when he either sees or feels that the penis is shrinking and receding. In order

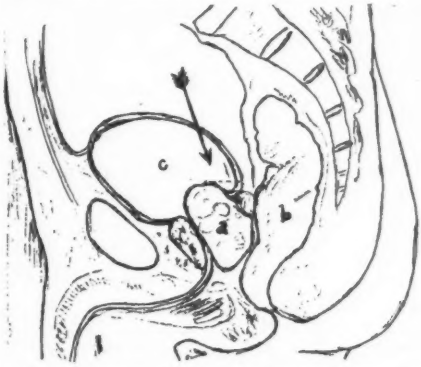

Fig. 1.—Section through Male Pelvis, Showing Relationship of Enlarged Prostate to Rectum; (A) Enlarged prostate; (B) Rectum; (C) Bladder; (Arrow) Residual Urine.

that, during this (often considerable) wait upon his part, he may not tire himself by maintaining this constrained position, it is well to advise him to rest his forearm crosswise on the wall back of the toilet (if this is possible) and then his head may come to a natural rest against the arm.

When this method is practiced, nocturnal urinations will at once commence to decrease, and there will be an immediate improvement in the qualitative analysis of the urine, with, finally, a more or less complete disappearance of abnormal elements from it.

Case Reports

Case 1: Mr. M. C.; age 58; weight 160 pounds; married. A prostatic enlargement (bi-lobar) had existed for ten years when I first saw him, in 1932. His nocturnal risings to urinate would often be as many as twenty. He complained of burning and smarting on urination and his urine contained some ammonia and pus and an excess of phosphates.

On June 4, 1932, I advised the positional method for him. In one week he apprised me that his nocturnal urinations had been decreased to ten times per night; in another week they were only five; and since then he has not had to urinate during the night at all. Every time I have examined his urine in the past two years it has been normal.

Case 2: Mr. S. S.; age 73; married; blood pressure, 170-80. For twenty years had been getting up at night with increasing frequency. His urine contained albumin and pus. The prostate gland was enlarged about four centimeters in all directions and presented, to the rectally examining finger, a large, rounded mass. He said that some nights he would get up as many as fifty times.

I advised the positional method for him, and within a month I had the satisfaction to know that his urinations (nocturnal) had been reduced to none at all or only one. He is now, and has been for the past year, very comfortable, day and night. The albumin persists in his urine, but is much less.

Case 3: T. M.; age 85; weight 176; blood pressure, 186-80; nephritis, interstitial; much uric acid in the urine and blood uric acid very high; up as many as twenty to thirty times at night to urinate.

The positional method of urination was advised, although there was little enlargement of his prostate gland, which was very hard to the touch. Within a week his general condition was much improved and the nocturnal urinations had decreased considerably. This is now the third year that he has used the positional method of urination, and he scarcely ever gets up to urinate at night. Albumin persists in his urine, with casts, but the pus, which was formerly so noticeable, has disappeared. I advised him, as I do all such patients, to make the "positional" a permanent method with him, for the sake of prevention.

It will be correctly assumed by the reader that I have employed, in these cases of prostatic hypertrophy, rational treatment and medicinal remedies, along with the positional method which I have advised them to use. Briefly stated, these adjuvants consist of diathermy, infrared rays, formin (methenamin) tablets, dilute hydrochloric acid, soda-water enemas (once or twice a week), cystic lavage, and intravenous injections of the solutions which I described in the June, 1933, issue of CLINICAL MEDICINE AND SURGERY, under the title, "Irradiated Solutions in Inflammations." A reprint of this latter article will be sent to any physician who requests it.

1539 10th Ave.

Quinidine Sulphate

By Edward Podolsky, M. D., Brooklyn, N. Y.

THE alkaloid quinidine was first isolated by van Heijningen in 1849, from a substance called chinoidine, a by-product in the preparation of quinine. He described it under the name of beta-chinine. In 1853, Pasteur prepared the same drug, perhaps in a somewhat purer form, and named it chinidine. Hesse, in 1868, in referring to it called it conchinine. Other less-used designations were cinchotine (Hlasiweyz) and beta-chinidine (Kerber).

Quinine, *"das Opium des Herzens,"* has been used for many years for its sedative action on the heart. It is stated that Skoda first recommended its use in heart disease. Its introduction into the therapy of auricular fibrillation dates from 1914, when Wenkebach described its administration in a Dutch merchant suffering from auricular fibrillation. This man, living in and acclimated to the Dutch colonies, was accustomed to take quinine for malaria and other ills and found, curiously enough, that it also controlled his periodic heart attacks. In 1917, Hecht reported cases of complete arrhythmia and of extrasystoles, favorably influenced by the intravenous injection of quinine. In 1918, Frey proposed the use of the dextrorotatory isomer of quinine, quinidine, instead of the alkaloid itself.

Physiologic Action

Physiologically, it has been found that quinidine exerts a specific action on the myocardium, and especially on the conduction system of the cardiac nerves. It retards the rhythm of the sinus node and diminishes the conducting power of the auricular myocardium. It is generally accepted that auricular fibrillation and auricular flutter are due to the "circus movements" which result from a circular contractile movement that travels, indefinitely and without pause, around the wall of the auricle. Since quinidine diminishes conductivity in the auricular myocardium and prolongs its refractory phase, it will establish a barrier that the contractions of the circus movement cannot pass. Under these circumstances the normal pacemaker, the sinus node, regains control of the auricular contraction and normal rhthym is suddenly restored. The normal control thus established may be permanent or may last as long as the myocardium is under the influence of the drug.

Quinidine has been most frequently employed in cardiotherapeutics in the treatment of persistent auricular fibrillation and persistent auricular flutter. It is particularly adapted for this therapeutic rôle because of the following specific effects: (1) It diminishes the sino-auricular rate; (2) it diminishes the rate of conduction in the auricle, along the auricular-ventricular junctional tissues and in the ventricle. For these reasons it brings about: (1) A progressive diminution in the auricular rate; (2) a simultaneous increase in the ventricular rate; (3) a sudden cessation of the auricular fibrillation, with a return to the normal rhythm.

The usual sequence of events is a coarse fibrillation, impure flutter, pure flutter, a short period of arrest of the whole heart, and a restoration of the normal rhythm. There is a preliminary and very early and progressive diminution in the auricular rate, even to 200 per minute. If the auricular rate falls to about 200 or under, there is a danger of the ventricles suddenly assuming the same rate as the auricles. Rarely does a slight rise in the auricular rate result in a long arrest of the whole heart. Whether the normal rhythm is finally restored or not, an increased ventricular rate, to 120 per minute or more, which may cause attacks of palpitation, is common enough during the first two days of quinidine administration. The increased ventricular rate may be controlled by a preliminary course of digitalis medication, in full doses. Extra systoles may be observed after the auricular fibrillation has ceased, and may give rise to palpitation.

Quinidine has had its widest use in chronic auricular fibrillation. It is, of course, impossible to tell beforehand which patients will respond favorably, but usually the group with mitral fibrillation responds better than those with sclerotic fibrillation. Patients with small hearts do better than those whose hearts are enlarged, and those who have, in the electrocardiograms, coarse auricular waves do better than those with fine waves.

Therapeutic Uses

While quinidine has been used with such signal success in auricular fibrillation, its field of usefulness has been extended to other heart conditions. It has been proved to be of distinct benefit in paroxysmal tachycardia. Boden was the first to apply 0.4 Gm. in intravenous injections during the attack. The result was very good, but many still consider this a dangerous way of giving the drug. Others have found that the oral administration of 0.4 Gm. of quinidine is also capable of stopping the attack. Even in cases of permanent paroxysmal tachycardia, quinidine has been used with curative effect. In one case it was used for a year without untoward consequence. Most patients who use quinidine consistently are relieved of attacks of paroxysmal tachycardia.

Morawitz and Kochrein have used quinidine to prevent the fatal onset from acute heart failure. Ventricular fibrillation is the cause of death from a rapidly failing heart. The subjective signs are an anginal condition, particularly during rest, cardiac asthma and cardiac attacks. A decreased intensity of the heart at the apex, lowering of a previously high blood pressure, effort dyspnea and tachycardia of uncertain origin are the usual objective signs.

The aim in the preventive treatment of cases of this kind is to reduce the irritability of the affected segments of the ventricular muscle responsible for the excessive extrasystoles and the ventricular fibrillation. It has been found that quinidine in 0.1 Gm. doses twice daily, will accomplish this nicely in a great many of these cases. It has also been found that a systematic quinidine treatment is effective in preventing sudden death in most patients with slight anatomic changes in the heart; especially in those with a sclerosis of the coronaries or with a syphilitic aorta.

Levine and Stevens evaluated the effectiveness of quinidine sulphate in coronary thrombosis complicated by ventricular tachycardia, with remarkable results. When ventricular tachycardia occurs in patients suffering from coronary thrombosis, it is usually transient and disappears in a few hours. However, occasionally it may persist. Digitalis, under such conditions, is of little if any value. Quinidine is the only remedy that offers any hope.

It must be given in fairly large doses. As much as 1.5 grams must be given every four hours, until the fibrillation is reduced, and smaller doses may then be administered to maintain a fairly normal rate. If the extrasystoles tend to reappear, the doses must be increased. Many clinicians have tried various drugs, such as atropine, nitroglycerin and adrenalin, but quinidine is the only remedy which yields any results. It is, without doubt, a life saver in cases of this sort.

Quinidine not only has a specific effect on the rhythm-regulating tissues; its effect is general. It is a well known fact that this drug lowers the general metabolism. The oxidative processes in the body are diminished. It has also an antipyretic and sedative effect upon the central nervous system. In restless patients quinidine is quite frequently used with success.

Quinidine may be given in tablet form or, as is preferable, in the form of gelatin capsules. As some people show an idiosyncrasy for the drug, it is best to test the patient in this direction by giving a 4-grain dose the first day and an 8-grain dose the second day. If there is no untoward reaction to the drug, 5 grains of quinidine sulphate three times a day is the initial dose. This dose is gradually and cautiously increased until normal rhythm is attained, but as a rule it is desirable not to exceed 50 grains a day. Some have advised increasing the dose as high as 72 grains in 24 hours, the drug being given day and night.

If after ten days the heart is not regular, the drug should be discontinued and digitalis given in fairly large doses for from one to three days, and then the quinidine started again. A dose of from 32 to 40 grains is given in 24 hours, and this dose is pushed until the previous dose is reached. If not successful, the quinidine is discontinued and another attempt is made from thirty to sixty days later. If no

normal rhythm is established either the first or second time, the patient should be put on a permanent ration of 4 grains three times a day. In some instances the heart will finally be restored to normal rhythm. Even in cases where the normal rhythm has been restored at the first or second course of treatment, it is advisable to continue giving quinidine for some weeks, in gradually decreasing doses, to insure against a relapse.

By careful observation one can foretell whether or not success will be attained in regulating the pulse with quinidine. Signs of an unsuccessful outcome are:

1. *Diarrhea:* Often quinidine will not succeed in correcting the irregularity if diarrhea is present, but there is no danger. One may try an astringent to prevent the diarrhea, or quinidine may be used with great caution intravenously.

2. *Vomiting:* Most often quinidine will not succeed if the patient is vomiting. After the vomiting has ceased, another trial should be made.

3. *Albuminuria* or chronic interstitial nephritis: Little if any effect is obtained when these complications are present.

4. *Auricular Fibrillation with Hypertension:* It does not seem to do much good to give quinidine when the patient has increased arterial tension. An attempt should always be made to reduce the hypertension. When it has been reduced, quinidine can be used. While there is no danger in using quinidine in cases of increased blood pressure, it is, as a rule, simply a waste of time.

The signs of probable success in the use of quinidine are just as predictable. These, briefly, are:

1. When the patient states that he feels no different after taking quinidine than he did before he took it, the dose may be pushed, as this patient tolerates the drug well.

2. When the pulse seems to be slower and apparently regular, quinidine should be continued, but the dose should not be forced up too rapidly.

3. When the heart has very short runs of speeding up and, in these periods of speeding, appears to be perfectly regular, the quinidine should be kept up according to the stated dosage.

In some cases discomfort is experienced in the taking of quinidine. Headache and palpitation are the chief sources of discomfort. Next in frequency are nausea, vomiting, epigastric distress, giddiness, diarrhea, precordial pain, fever, tinnitus aurium, mental depression, excitement, flushing and sweating. Urticaria and scarlatiniform eruptions have also been observed.

Symptoms of Danger

The patient should be constantly watched for dangerous symptoms, among which are the following:

1.—*Induction of heart failure:* There is the possibility of the occurrence of heart failure as the result of the acceleration of the ventricular rate, caused by quinidine. By careful observation this can be avoided. If it should occur, the symptoms can quickly be relieved by prompt and adequate digitalis therapy.

2.—*Occurrence of rhythms indicating intoxication of the heart muscle:* If the effects of quinidine are followed electrocardiographically, it is found that, in a number of patients, particularly those in whom it is not possible to establish a normal rhythm, ventricular premature beats appear. At infrequent intervals these may be coupled with normal complexes, as is seen in the early stages of digitalis poisoning. Occasionally such ectopic beats are transitory, disappearing within an hour or two, but often they persist and their frequency increases. Under the latter circumstances they afford a sign indicating cessation of further therapy; for, if more quinidine is given, a succession of fairly rapid, regular ventricular ectopic beats may ensue, giving rise to the rhythm termed *ventricular tachycardia,* which may be the immediate precursor of ventricular fibrillation and death.

3.—*Embolism:* It is a matter of common belief that clots tend to form in the auricular appendices more commonly when the auricles are fibrillating than when the mechanism is normal. The findings of Lewis tend to support this concept. It is, therefore, sometimes seen that patients receiving quinidine have instances of embolism. It seems, however, that the danger of embolitic accident after this drug has been given has been unduly emphasized. It is in patients with advanced heart failure that clots are likely to form in the auricles. If such cases do not respond promptly and well to efforts at treatment aimed at building up a cardiac reserve, especially if they are refractory to digitalis, it is probably not worth while to make an attempt to restore normal rhythm. Signs of peripheral venous thrombosis should be looked for and, if present, serve as an index of a tendency for intravascular clots to form. In such individuals it is also well not to attempt to use quinidine.

4.—Quinidine should be withheld while there are any signs of congestive heart failure. Most reports of a fatal outcome were in those patients who were decompensated.

5.—Caution should be used if digitalis is given with quinidine. Accidents from such combined use have been reported.

6.—Barringer recommends that, before quinidine is given and while the patient is under digitalis, an attempt should be made to improve the muscle tone of the body in general by carefully regulated physical therapy, and bases successful results with the drug on this method.

7.—*Showers of petechiae:* The patient should be examined daily—the conjunctivae, the mouth and the body in general—to see if there are any petechiae. If there are, quinidine should be discontinued without delay. Frequently the heart becomes regular for a few seconds only, and the showers of petechiae are then caused.

8.—*Signs of respiratory distress:* This is evidenced by a sort of air hunger, with slight cyanosis, dizziness, anxious expression and a cold sweat. In such cases the quinidine should be discontinued, and caffeine, which in such cases is an absolute antidote, should be given.

9.—*An increased pulse rate:* If the pulse is running over 125, quinidine should be stopped. As a rule, if it is discontinued, the tachycardia will cease.

10.—*Increased cardiac failure:* In a number of instances, the administration of quinidine has apparently led to an increase in the grade of cardiac failure. This has caused various authors to advise against its use in high-grade cardiac failure. In such cases, a course of digitalis is usually given first. This effect is probably due to the increase in heart rate which the quinidine often produces in cases of auricular fibrillation, either through its effect on the auricular mechanism or by paralyzing the vagi. In cases of heart failure, therefore, it is best to digitalize the patient before using quinidine. When the patient's pulse rate at the wrist equals the rate at the apex of the heart and is 84 or less, and if the patient can do moderate exercise without decompensation, he is generally ready for quinidine therapy.

11.—*Chronic heart disease,* particularly chronic mitral stenosis and auricular fibrillation more than a year old is, in general, a contraindication for several reasons: First, there is a danger from embolism and from auricular thrombosis, when the auricles again start their normal contractions after years of ineffective activity occurring in fibrillation; also, thrombosis in the auricles is more common in mitral stenosis than without stenosis.

Of all the drugs known at the present time, quinidine sulphate is the most efficient in establishing normal heart rhythm in the shortest time. It is a drug to be used with great caution, and the patient must always be under the observation of a physician, who watches for unfavorable signs and symptoms. The patient should be in bed and, if possible, in a hospital for the best results. When used with care, really good results are quite frequently obtained, and permanent benefit is secured in a great many cases.

7119 Nineteenth Ave.

The Nature and Uses of Beechwood Creosote

By Lucius F. Herz, Ph. B., M. D., New York, N. Y.

CREOSOTE and its derivative and chief constituent, guaiacol, while in use prior to that time, were first given publicity for therapeutic use by Sommerbrodt, in 1887. Considering the markedly beneficial results reported by eminent internists and pharmacologists, it is strange that it has not been more widely used than it has—in fact, it seems to have been forgotten by some practitioners. When men like Solis-Cohen[2] make the statement that creosote is indispensable in pulmonary tuberculosis, it stands to reason that the drug must have merit.

Beechwood creosote is obtained by the distillation of beechwood tar, and is the only form of creosote that may be used with safety medicinally. Much of the creosote obtained in the market is made from coal-tar, but it is said to be too toxic for medicinal use.

Beechwood tar contains 5 percent of creosote. The distillate—creosote—(creosotum U. S. P.) contains 60 to 90 percent of guaiacol, with varying amounts of cresol, creosol and homologues.[1]

Creosote is an empyreumatic, volatile oil. It is an almost colorless or slightly yellow, highly refractive, oily liquid, with a penetrating, smoky odor and a burning, caustic taste.[2]

Creosote carbonate (creosotal) is the carbonate of the various components of creosote, and is said to be less likely to upset the stomach than ordinary creosote. The dose is considerably larger—15 to 30 grains (1 to 2 Gm.) twice to three times daily—while the dose of ordinary creosote is 1 to 5 minims three times daily.

Therapeutic Uses

Topically, creosote is a powerful antiseptic, an astringent and a local anesthetic. It is used full strength in dentistry to stop toothache, and in the preparation of a cavity, prior to filling.

Topically, also, but diluted (1:100 to 1:500) in albolene, glycerin or water, creosote may be used to swab the nose and throat, or as a gargle or spray. It is stimulating, astringent, antiseptic and mildly hemostatic; and is useful in coryza, laryngitis, tracheitis, tonsillitis, bronchitis and ozena.

For Inhalations: Solis-Cohen[2] recommends that 60 drops of creosote be dropped upon 30 grains of magnesium carbonate or kaolin, that this be stirred into an ounce of water, and one to two teaspoonfuls of the mixture

be placed in a tea-kettle of boiling water for inhalation. Another method consists of placing 10 to 20 drops of creosote, plain or mixed with equal parts of eucalyptol, chloroform (alcohol or spirits of chloroform), upon the sponge of a Yeo respirator, and inhalations continued for several hours at a time. This is especially useful in the irritative cough of tuberculosis, where cough is relieved and breathing made more easy. The action is not alone local, but a certain amount of absorption takes place, giving the systemic healing effects of creosote.[2] Creosote inhalations are markedly efficacious in fetid bronchitis and ordinary subacute and chronic bronchitis.

Internally: For the past half-century, creosote has found a wide use as an internal medicament for the palliative treatment of pulmonary tuberculosis and chronic bronchitis.

Creosote is not considered a cure for pulmonary tuberculosis, but its chief value is that it acts as an expectorant, lessening the profuse expectoration so often found in this disease, and allaying the irritative cough. Sollman[3] states that tuberculosis patients placed upon creosote will gain in appetite, nutrition and weight, the cough is lessened, and the fever and night sweats decreased. The benefits are seen only in early cases if the use is long continued, and if it does not cause gastro-intestinal upsets. It should be given to the limit of tolerance, starting with one drop three times a day and increasing to 5 or 10 minims three times a day.

Solis-Cohen[2] considers creosote indispensable in the treatment of pulmonary tuberculosis. It is not useful in the very early incipient cases nor in hemorrhage, where it is distinctly contraindicated. In florid early cases and in moderately advanced cases, it is very useful. Large doses must be reached rapidly, and frequently calcium, parathyroid and digitalis must be given simultaneously.

He goes on to state that, in tuberculosis of slow progress, without hemorrhage and with abundant expectoration, creosote shows its remedial power. The first result is a modification of the sputum, which diminishes in quantity and improves in quality, becoming less purulent (although numerous bacilli may remain), the cough becoming less troublesome and more effective. Fever and sweating and also vomiting (if present) are ameliorated. Râles become fewer and less moist, digestion improves, appetite increases, weight is taken on, and general nutrition bettered. This is most markedly observed in those taking creosote and cod-liver oil simultaneously. The beneficial effects are less noticeable in certain mixed infections, but even here some improvement generally takes place.

Creosote has also been found useful for gastric irritation or fermentation. Here ½ to 2 minims in capsules, before meals, have been found useful. It is also useful as an intestinal antiseptic, and has proved helpful in some cases of recurrent diarrhea.[2]

For pulmonary tuberculosis, creosote is best given in the enteric-coated capsules or in liquid form, largely diluted. The dose is begun at 1 minim three times a day, and after the first few days, each dose is increased by one minim until 10 to 20 minims is reached, or gastric symptoms ensue. The drug is then suspended for a week or rapidly decreased, and kept at a maintenance level, below the limit of tolerance. Generally 10 minims, three times a day, may be well borne.

If gastric irritation ensues after creosote, use creosote carbonate in capsules, or with calcium hypophosphite, given in hot milk or water. Begin with 5 to 10 minims, three times a day, and increase to 30 to 40 minims, three times a day.[2]

Hare[4] mentions the following prescriptions as useful methods of administering creosote:

℞ Creosoti (beechwood) ... 12.0
Tinct. Benzoin Comp.... 30.0
Spir. Vini Rectificati....240.0
Vini Xerici 960.0
M et Sig.: Tablespoonful in a wine-glass of water three times a day.

℞ Creosote (beechwood)...2 to 4
Tinct. Gentian.... 30.0
Alcohol 30.0
Vini Albi q. s. ad.....120.0
M et Sig.: 1 teaspoonful in water three times a day.

Hare[4] states that creosote is useful as an expectorant only, although many claim cures in early tuberculosis, and it has been highly lauded by European clinics.

Creosote has even been used by endotracheal and endobronchial injection. Here from 5 to 60 minims of a 2-percent solution in albolene are used.

Having shown the antiseptic and healing qualities in inflammation of the nasal, tracheal and bronchial mucosa, and having shown it to be efficacious in these conditions by any one of its three common methods of administration (by inhalation, topically or orally), the use of diluted beechwood creosote, combined with other healing medicaments, administered as a hot nasal douche, seems to be a logical and scientific extension of the knowledge about this drug.

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145 West 71st Street.

PHYSICAL THERAPY AND RADIOLOGY

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The Importance of Electrical Reactions

By E. P. Cumberbatch, B. M. (Oxford), D. M. R. E. (Cambridge), F. R. C. P. (London)
Medical Officer in Charge of The Electrical Department, and Lecturer on Medical Electricity, St. Bartholomew's Hospital, London

WHAT are known as "electrical reactions" of muscles are the contractions they exhibit in response to electrical stimulation. In cases of paralysis, these reactions may be altered and important information may be obtained for the purpose of diagnosis.

Those who consult books on medical electricity, in order to learn something about electrical reactions, are likely to be dismayed at the lengthy way in which the matter is treated in some of the authoritative textbooks. Their discomfiture is not dispelled when they see various pictures of the limbs and trunk, covered with dots showing the position of "motor points." (The writer can remember his feverish efforts to memorize the situations of these points during one summer holiday prior to the commencement of his electro-medical work.) Those who turn to textbooks on medicine or surgery find stilted accounts of "constant" and "interrupted" currents, quick and sluggish contractions, and the hieroglyphic "A.C.C. > K.C.C." Medical students in this country are supposed to know the definition of the "reaction of degeneration" (and it is conceivable that their examiner may have to learn it as well, repeating it under his breath while he is asking the students about it.) All these facts may account for the unpopularity of the subject of electrical reactions among those who are learning medicine, and the lack of attention to it on the part of practitioners.

Why bother about electrical reactions? Is it not enough, in cases of paralysis or weakness, to test the sensation in the part supplied by the suspected nerve and ascertain whether there is any voluntary power in the muscles? The answer to these questions is the following: Clinical examination is most important, but sometimes the clinical evidence is uncertain or unreliable. During the tests for the presence or absence of sensation, the patient's answers are not always trustworthy. During the test for voluntary power, the patient may refuse to move muscles which he has not lost control of, or the presence of pain may prevent him from moving them. But he cannot control the way in which his muscles respond to electrical stimulation. Even if the information which he supplies is trustworthy, the discovery of R. D. (the reaction of degeneration) will provide additional information that will either confirm the diagnosis or compel its revision. On occasions a sure diagnosis cannot be made without knowledge of the reactions.

In England the task of determining the reactions is usually entrusted to the medical officer in charge of the department of electrotherapeutics or physical therapy. By reason of his larger experience he can provide accurate reports in difficult cases where judgment is called for. But there are plenty of easier cases which can be tested by a doctor who is not a specialist. All he need learn is how to make the muscles of the body contract by means of the faradic and galvanic currents and to know what to look for in the confraction.

He should procure a medical induction coil and a galvanic battery. The first will provide him with a *faradic*, the second with a *galvanic* current. He will also need a couple of electrodes. One of these—*the active*, or *testing*, electrode—consists of a padded metal disc about ¾ inch in diameter, mounted on the end of a wooden handle. A make-and-

break key is mounted on the handle so as to enable the operator to switch the current on and off at any moment he wishes. The other, or *indifferent*, electrode is a padded metal plate about 6 inches by 4 inches. A couple of insulated wires serve to connect the electrodes to the source of current.

Normal Reactions

Having procured the apparatus, he should now make some of the muscles of a normal subject contract. In other words, he should demonstrate *normal reactions*. To do this, place the indifferent electrode, moistened with saline solution, on the chest or back; set the coil in operation; place the pad of the active electrode, likewise moistened with saline solution, on the front of the forearm; depress the key and increase the current until it is strong enough to cause contraction of one or more of the muscles of the front of the forearm. By moving the electrode over the skin, each muscle in turn can be made to contract. It contracts when the electrode is on a certain spot. This spot is called the *motor point*. Each muscle has its own motor point. It is the surface marking of the point of entry of the motor nerve into the muscle.

By proceeding in this way and moving the electrode over the skin of different regions of the body, all the muscles of the body, except those which are too deeply situated, can be made to contract.

The faradic current produces a continuous contraction (tetanus), which persists while the current is passing. In the case of the long muscles of the limbs, the easiest way of detecting a contraction is to place the tip of the index finger on the tendon of insertion of the muscle. Contraction of the muscles of the hands, feet and face is best observed by noting the movements of the parts on which the muscles act. Contraction of bulky muscles like the biceps, deltoid, glutei, etc. is indicated by change in contour of the skin.

The operator will observe that *groups* of muscles contract when the testing electrode is in certain situations. When this happens the electrode is over a motor nerve trunk where it is near to the surface.

The operator should now connect the electrodes to the source of galvanic current, making the testing electrode the *kathode*. Starting with the forearm, as before, he should alternately depress and relax the key, gradually increasing the current until the muscle under the electrode contracts. The contraction takes the form of a single twitch. The muscle quickly contracts at the moment when the current starts, and it relaxes quickly, even if the current continues to flow. The galvanic current causes a stinging sensation which is painful if the current is strong. If the testing electrode is made the *kathode* (by connecting it to the *negative* terminal of the source of galvanic current) a twitch can be obtained by a weaker current than that required when the testing electrode is the anode.

If the testing electrode is placed over a motor nerve trunk the galvanic current will produce a quick twitch of the muscles supplied by that nerve.

The operator now has demonstrated the reactions of healthy muscles. These are called *normal* reactions. The faradic current tetanizes the muscles and the galvanic current makes them give a quick twitch. The contractions are obtained when the current passes either through the muscle itself or through the motor nerve trunk away from the muscle.

There is just one fact that should be known before the muscles and nerves in abnormal cases are tested. When the testing electrode is placed over a muscle the contraction is due, not to direct stimulation of the muscle fibers, but to stimulation of the motor nerve in the muscle. Motor nerve has a higher degree of electrical excitability than muscle. Consequently the muscle contracts in response to stimulation of its motor nerve. In the language of physiology, the muscle is stimulated *indirectly*.

Reaction of Degeneration

If, now, the operator proceeds to test the reactions in cases of paralysis he will meet, before long, a case showing the following departures from normal: He will find that the faradic current, whatever its strength, is wholly unable to produce contraction of the muscles, either when it is placed over the muscles themselves or over the nerve trunk. If he uses the galvanic current he will find that it produces, not a quick twitch, but a lazy, sluggish contraction. If the muscle behaves in this abnormal manner it will remain contracted while the galvanic current is flowing. When the current ceases the muscle will relax, not quickly, but sluggishly. Its relaxation will be even more sluggish than its contraction. If the galvanic current is passed through the nerve trunk, away from the muscle, it will not cause any contraction.

When the muscle contracts and relaxes in this sluggish manner it is exhibiting the *reaction of degeneration* (*R. D.*); but before this reaction can be diagnosed the operator must first show that the passage of the faradic current through the muscle is unable to cause contraction. He must also show that the passage of the faradic or galvanic current through the nerve trunk cannot make the muscle contract.

Why does the muscle behave in this perverse manner? Why is it that muscles in other cases, though paralyzed, behave like normal muscles in response to electrical stimulation? These facts are easily explained. Severe injury or disease of a motor nerve

not only prevents the passage of voluntary impulses, but it deprives the nerve of its electrical excitability and conductivity. In addition it causes alterations in the contractile substance of the muscle. The muscle does not lose its power to contract in response to artificial stimulation, but it contracts sluggishly instead of briskly and the faradic current is no longer able to make it contract. The galvanic current is able to do so. Mechanical stimulation is also able to make it contract.

When a muscle is in the condition that makes it behave in the manner just described it is said to be "denervated." Its motor nerve has lost all its properties and functions. It is a muscle without its motor nerve.

When the operator tests a muscle and its motor nerve trunk and demonstrates R. D., he proves that the muscle is denervated. If a muscle is denervated two absolutely certain conclusions can be made:

First, that the injury or disease responsible for the paralysis is somewhere in the *lower motor neuron;* i.e., in the motor nerve fiber or in its nerve cell. Injury or disease of the *upper* motor neuron, however severe, can never denervate a muscle; hence it can never cause R. D., even though it may cause complete paralysis. If the disease is one which primarily affects the muscles themselves (as in the various forms of myopathy) or if the muscles are injured and paralyzed, R. D. will never be found.

Second, the discovery of R. D. proves that the disease or injury of the lower motor neuron is *severe.* Minor degrees of disease or injury of the lower motor neuron may cause paralysis without denervating the muscle. When this is the case there will be no R. D. The reactions will be normal in type.

Incomplete R. D.

There is another form of abnormal reaction which is known as the *incomplete,* or *partial,* reaction of degeneration, in order to distinguish it from the *complete* reaction of degeneration, already described. In the partial R. D. the muscle contracts sluggishly in response to galvanic stimulation, but it retains some power to contract when stimulated by the faradic current. It contracts, too, when its motor nerve is stimulated, although the contraction is weak.

Hitherto there has been uncertainty as to the precise meaning of partial R. D. There is no doubt, however, that the *lower* motor neuron is involved when partial R. D. is shown. But whereas *complete* R. D. signifies that *all* the muscle fibers are denervated, *partial* R. D. signifies that some of the muscle fibers have escaped denervation. When partial R. D. is exhibited the operator can deduce that the lesion in the lower motor neuron does not involve all the motor nerve fibers to an equal degree. Some of the nerve fibers have been damaged to a degree sufficient to cause denervation of the muscle fibers which they supply; others have been damaged, but not sufficiently to cause denervation of their muscle fibers. Some of the nerve fibers, in fact, may not have been damaged at all.

It is in cases where there is an incomplete lesion that the greatest difficulty lies in the path of the reaction-tester. The neophyte is likely to report weak reactions of the *normal type* when partial R. D. is being exhibited. He is equally likely to report partial R. D. when weak reactions of normal type are being exhibited. He will often be in doubt whether a contraction is quick or sluggish: It may be neither quick nor sluggish. The judgment of the experienced tester is required, if accurate reports are needed. But this need not deter the beginner. He will have no difficulty in recognizing clear-cut complete R. D. or well-marked reactions of normal type.

It must be remembered that R. D. cannot be demonstrated immediately after the onset of the paralysis. The pathologic changes in the muscle, that cause it to behave in the peculiar manner described, are not complete until ten days have expired. If a motor nerve has been divided or severely damaged, the muscles which it supplies will not exhibit that peculiar sluggish response to galvanic stimulation before ten days have elapsed. If this fact is forgotten, the tester will run the risk of missing the information which he is in search of. Finding that the muscles behave in the same way as they do when they are normal, he will think that they are not denervated and give a better prognosis than that which would be justifiable if they were denervated.

Talking about prognosis, it is important that those who are not familiar with electrical reactions should realize that the reaction of degeneration does not necessarily signify a bad prognosis. The prognosis depends on the nature of the lesion in the lower motor neuron. Recovery is possible after a motor nerve has been injured or diseased; if recovery occurs, the reaction of degeneration will disappear and normal reactions will return. Consequently the prognosis of R. D. is the prognosis of the lesion responsible for R. D.

Some examples will illustrate the advisability, or even the necessity, of ascertaining the electrical reactions in paralysis. The first example will show how knowledge of the reactions may help the doctor in deciding whether paralysis is real or imaginary. The second will show how knowledge of the reactions may be of assistance in deciding whether paralysis is feigned or due to nerve injury. The third will show how assistance may be gained in making a prognosis. The fourth will show how information in regard to the situation of a nerve lesion may be gained if the reactions are tested.

It must be realized, of course, that decisive

information cannot be obtained in every case that is tested, particularly if the reactions are normal. But in a few cases the information gained may compel a revision of the diagnosis; in these the failure to determine the reactions may lead to serious mistakes.

Case Reports

Case 1: Not long ago the writer was asked to undertake the treatment of wrist-drop in a young woman. There was no history or evidence of trauma and no complaint of pain. No loss of sensation was discovered. The case had been regarded as one of "hysterical" paralysis. Before prescribing treatment a test was made of the reactions of the paralyzed muscles and R. D. was discovered. This proved that the paralysis was due not to hysteria, but to a lesion of some degree of severity in the lower motor neurons.

Case 2: A man, who gave a history of strain of the leg, complained of inability to raise his foot. A long course of treatment by massage had been practiced but there were no signs of improvement. The question arose as to whether the paralysis was feigned, but the discovery of R. D. proved that the anterior tibial group of muscles was denervated.

Workmen who have sustained injury and are seeking compensation may complain of persistent paralysis long after all outward and visible signs of injury have disappeared. If there is any suspicion that the paralysis is feigned, it is advisable to make a test of the electrical reactions of the muscles. If the reactions are normal, this information will not help the doctor, even if they are very weak; but the discovery of R. D. will prove conclusively that the patient is not attempting fraud—at any rate, as far as the paralyzed muscles are concerned.

In courts of law it is possible, in future times, that the doctor may be asked whether he has procured a test of the electrical reactions in the case of a plaintiff who is seeking compensation.

Case 3: Two patients suffering from paralysis of the facial nerve (Bell's palsy) were sent for electrical treatment. The muscles were completely paralyzed and toneless. In paralysis of this variety the lesion is in the lower motor neuron. There is no need, therefore, to test the reactions for diagnostic purposes; but they were tested in the cases under consideration. In one the reactions were normal in type; in the other R. D. was exhibited. What about the prognosis? It has already been stated that the prognosis in R. D. is the prognosis of the lesion responsible for the R. D. In Bell's palsy the lesion is inflammatory. The prognosis usually is good, because the inflammation disappears; but the patient in whom the R. D. was exhibited had a severer lesion than her fellow-sufferer, in whom the reactions were normal. Consequently the first patient was told that about nine *months* would have to elapse before recovery; the second was told that she would recover in three to four *weeks*.

Case 4: The patient complained of pain and weakness of the muscles of one hand. The muscles were somewhat wasted and there was weakness of those muscles of the forearm that are supplied by the medium and ulnar nerves. These muscles, however, were found to react normally, whereas the intrinsic muscles of the hand showed R. D.

It is very unlikely for a lesion in the forearm or upper arm to pick out those nerve fibers that supply the intrinsic muscles and spare those that supply the flexor muscles in the forearm. It will be remembered that the first dorsal spinal nerve contains the fibers that are destined to supply the intrinsic muscles. Consequently the report of the reactions in the case under consideration favored the diagnosis of a lesion in the brachial plexus. X-ray examination eventually revealed the presence of a supernumerary rib.

It is hoped that this very sketchy account will enable the reader to realize that electrical reactions are not tested merely for academic purposes. It is not intended to show that less care is necessary in making the preliminary clinical examination. In theory, and on paper, all the information that is of value can be derived, in every case, from clinical findings alone and without knowledge of the electrical reactions. In practice, however, this belief is like ideal socialism — a beautiful dream.

BLEEDING THE GOVERNMENT

During the past eighteen years, we have been destroying the government in America by bleeding it, rather than supporting it. We exercised all the science and precision of an army setting about to invade and destroy a neighboring government. We have organized ourselves into nation-wide organizations, financed them well, and sent our emissaries to the government at Washington, the capitals of the 48 states, to the county courthouses, to the city halls, the school boards, and to township boards, to demand and receive our bounty from the public treasury.—HAROLD MCGUEIN, Congressman from Kansas.

CRIME

Crime, for the most part, is merely our traditional profit-economy, operating without benefit of law.—H. A. OVERSTREET, in *"We Move in New Directions."*

A LIVING FOR THE DOCTOR

(The BUSINESS of Medicine)

The Business Approach to the Patient

By C. C. Patchen, M. D., Jacksonville, Ill.

DISREGARD of business methods is the main reason why many physicians' savings are inadequate to support themselves and their dependents, during their declining years.

Except in emergencies, there is always ample time and no reasonable excuse why physician and patient should not discuss the financial side of office work before treatment is begun, and come to a definite understanding concerning the cost and when the fee is to be paid. In fact, honest patients prefer a flat-fee arrangement to the slip-shod methods employed by many physicians. Furthermore, such an arrangement is practicable, honorable and fair, to both physician and patient, and prevents misunderstandings.

No business man will extend credit to an individual who has not earned the accommodation of a credit account, through having a satisfactory credit rating. Neither should a physician knowingly accept "deadbeat" patients, unless he specifically desires to render philanthropic services. For the purpose of self-protection, physicians should require such patients to sign a non-liability waiver before treatment is begun. This is a dangerous type of person with which to deal, and a suit for malpractice is more likely to be the result than an increase in desirable practice.

The extension of credit is based on four factors, to wit: first, patients who are both able and willing to pay; second, patients able to pay but not willing; third, patients willing to pay but not able; fourth, patients neither able nor willing to pay. Because patients are not always truthful about their financial status, it is oftentimes difficult to ascertain how large a fee they can afford to pay.

The credit standing of patients may be obtained by: a personal interview with the patient; through a third party; from local chambers of commerce; through credit bureaus handling doctors' credits; and from city and county lists of persons who are receiving aid.

The record card, shown considerably reduced in size, is useful in the elimination of many undesirable patients. It is helpful when desiring to write to patients that do not come for treatments regularly, and when corresponding with persons who fail to meet their financial obligations promptly.

Patient's Record Card

Full name and address.....
.....
Age..... Occupation.....Business and residence telephone numbers.....
Employer's name and address.....
.....
Member of the firm or employee?.....By whom referred and address.....
.....
Cash or special arrangement.....The fee.....
Name of person responsible for the fee.....
.....
Name of wife—if the husband is the patient—and vice versa.....
Space to record present ailments and date of treatments.....
.....

The value of a physician's service, from the patient's point of view, is a mental concept, and its worth is estimated according to the patient's personal opinion of the seriousness of his illness, or from the fee an acquaintance paid for the treatment of an ailment that was, in his opinion, similar to his present illness. One patient will place a value on medical services two or three times as high as that of another patient. Some patients regard all physicians' fees as exhorbitant. Others try to obtain a reduction of the fee when treatment is completed. For these and many other reasons, the amount of the fee and the manner in which it is to be paid should be decided definitely, before treatment is begun.

Leniency, tact and dignity are physicians' traditional attitude toward the collection of fees. However, what should a physician do in the event treatment is applied for by one who is a known "deadbeat," but is financially able to pay? Should treatment be given, knowing that the fee will never be paid? Suggesting payment in full in advance, or the payment of a specified amount each time treatment is given, is justifiable when treat-

ing this class of patients. If this arrangement is not satisfactory to the patient, it is not unprofessional to obtain a written promise to pay.

Sometimes a third party is present and will say: "Treat this man and I will pay the fee, if he doesn't." Remember that a verbal promise to pay is of no value if denied, unless it can be proved. Therefore, take the precaution to obtain a written agreement signed by the patient and by the promisor. Their memories might be faulty in a court of justice, and if the judge and the jury believed their version of the agreement, the physician in the case would lose the value of his service and be compelled to pay court costs as well as attorney fees.

It is generally understood that medical and surgical fees are due when treatment is completed, unless a definite arrangement has been made in advance to pay otherwise. If the fee is not paid in advance, an adequate payment made each time treatment is given, or all of the fee paid when patients are symptomatically cured, obtain an interest-bearing judgment note, signed by the husband and his wife—especially by the wife. This arrangement will insure the collectability of the account from the wife, in the event of the husband's death before the note is due. This plan is far preferable to an open book account.

When a "slow pay" patient makes a payment, invariably write the balance that he owes you on the receipt. This will not only keep him informed as to the amount he still owes, but it seemingly creates within conscientious debtors an urge to make additional payments.

A small cash discount is the strongest collection argument known, and will sometimes induce patients who intended to make weekly or monthly payments, to pay all of the fee in advance.

The reduction of the individual fee to the ability of individual patients to pay is, apparently, superior to a general reduction of the fee schedule.

Oftentimes our patients say to us: "Ever since I was operated upon, the hospital doctors have shown an interest in my case by following me up with letters, asking how I am getting along." Individual practitioners should also take steps to keep in touch with their patients, and endeavor to bring about their return when in need of further treatment. If the code of ethics permits the so-called ethical members of the medical profession, who are doing work in hospitals, to "advertise" through the agency of personal follow-up letters, they should make no objection if the independent members follow their footsteps.

Suggest semi-annual examinations to your clinically cured patients. Explain that such examinations are for the purpose of detecting disease in its incipiency and that, as a rule, disease can be more easily and quickly eradicated then than at any other time. Explain also that the cost is less then than if treatment is neglected. Instruct them to come to your office for consultation at once, should there be the least indication of a recurrence of their former ailment, before time for the semi-annual check-up.

Write to those persons who fail to return within six months, that it is time for their periodic examination. Suggestion has its psychologic value, therefore specify a definite time for them to come to your office. All of the persons to whom you write will not accept your invitation, nevertheless many will express their appreciation for your interest in them sufficiently to write a personal letter, and you will retain the patronage of many who would otherwise have gone elsewhere for treatment. The fees obtained for secondary treatment will reimburse you many times over for the time spent and the expense incurred in correspondence.

Take sufficient time to explain to your patients the nature of their ailments and the treatment that will be required, in so far as they can understand and should be told. Hurrying through consultations and examinations is a serious mistake, and should be avoided. Most patients are not "dumb," and if not given the attention they are entitled to and that their case requires, will go to some one else for treatment.

In Conclusion

1.—Become fully awake to the fact that the practice of medicine and surgery is a *business*, from which you earn a living for yourself and your family.

2.—Evaluate your services and convey to the minds of your patients its value, in terms of restored health and earning power.

3.—Discard traditional methods of handling the business end of your profession.

4.—Do your work well and, if your patients do think your fees high, they will be satisfied and be boosters for you.

5.—Be tactful and inspire confidence in your patients. Make them feel that you are their friend and have an interest in their welfare.

6.—Write a letter of appreciation to those who refer patients.

7.—Insist on the payment of your fees with reasonable promptness.

241 Caldwell St.

NOTES AND ABSTRACTS

The Allied Professional Societies

WE need a political bloc to represent organized ethical professions!

During the past ten years, considerable propaganda has been spread, through various channels, to the effect that democratic government is doomed to be replaced by dictatorships. Here in this country we have resisted such influences and have maintained our traditional ideas of democratic policies. But the fundamental economic disturbances resulting in dictatorships in other countries have not been without effect upon our own country. We are witnessing here a scramble for power and privileged position. Those groups that are organized and articulate are receiving the lion's share of the Federal gifts and the privileged positions, in the new economic setup.

The professional class alone has been entirely devoid of organized influence. We must articulate, as a group, by means of the ballot box. This is the one method of defense in a democratic government. Politicians run our government and make our laws. They must learn to respect the political strength of the allied professional societies.

The experiences of the past few years, in Chicago, have taught us how utterly inadequate our present types of medical, dental and pharmaceutical organizations are to cope with politicians and corporations. The Federal government has spent many millions in relief medical care, and has put the control of this relief in the hands of the laymen. Where have we been while all these arrangements were being made? Had we a real political bloc, in merely local politics, Mr. Harry Hopkins, of Washington, and the State Emergency Relief Committee would have come to us for advice and regulation. As it was, we had to be thankful for the privilege of a conference with the Committee. The same holds true for the attempts to enforce our medical practice act. The same will continue to hold true when the Federal government enacts job insurance and medical insurance. Without proper political strength, the government will tell us what to do and even how to do it. Without a unified political bloc we can never enact proper state laws to curb corporations practicing medicine and stop unfair and unethical advertising.

In the past, our medical societies have shied away from organized political action. Their reasons for doing so may have been adequate in the past; but now there is no longer any choice. Dr. Cary, a past-president of the American Medical Association said, in effect, at the recent Cleveland meeting, that unless the professional class united politically it would lose its independence. It is not sufficient for one man, like Dr. Neal in Springfield, to tell us for whom to vote. We must have organized campaigns so that the politicians will come to us for advice on medical regulation, and not to lay corporations and renegade doctors.

The Medical Economics Club of Chicago realized the importance of political action early in its career, and immediately urged the formation of political groups called Allied Professional Societies. These are now being formed. Representative men from the medical, dental, nursing and pharmaceutical societies met several weeks ago and organized the Allied Professional Society of Chicago. Our purpose is purely political. We intend to have a say in the regulation of the professions responsible for the health of the nation. We mean business! We are eager to hear from similar groups in other cities.

N. S. ZEITLIN, M.D.

Chicago, Ill.

Ten Economic Principles of the A. M. A.

HERE is the socalled "Ten Point Platform," adopted by the House of Delegates of the A. M. A. at the Cleveland meeting.

It will, no doubt, be interesting to many to compare this with the Board Report to the American College of Surgeons, which was published in our August issue in this department.

1.—All features of medical service in any method of medical practice should be under the control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control.

2.—No third party must be permitted to come between the patient and his physician in any medical relation. All responsibility for the character of medical service must be borne by the profession.

3.—Patients must have absolute freedom to choose a legally qualified Doctor of Medicine who will serve them, from among all those qualified to practice and who are willing to give service.

4.—The method of giving the service must retain a permanent, confidential relation between the patient and a "family physician." This relation must be the fundamental and dominating feature of any system.

5.—All medical phases of all institutions involved in the medical service should be under professional control, it being understood that hospital service and medical service should be considered separately. These institutions are but expansions of the equipment of the physician. He is the only one whom the laws of all nations recognize as competent to use them in the delivery of service. The medical profession alone can determine the adequacy and character of such institutions. Their value depends on their operation according to medical standards.

6.—However the cost of medical service may be distributed, the immediate cost should be borne by the patient, if able to pay, at the time the service is rendered.

7.—Medical service must have no connection with any cash benefits.

8.—Any form of medical service should include within its scope all qualified physicians of the locality covered by its operation who wish to give service under the conditions established.

9.—Systems for the relief of low-income classes should be limited strictly to those below the "comfort level" standard of incomes.

10.—There should be no restrictions by non-medical groups on treatment or prescribing, unless formulated and enforced by the organized medical profession.

Look for THE LEISURE HOUR among the advertising pages at the back.

The Autopsy Problem†

THERE is great need of increasing the number of well-done and well-studied autopsies, especially in the smaller communities. To do this, the medical profession must be made autopsy conscious and the autopsy must be made interesting and profitable to the physician.

Lincoln, Neb., a moderate-sized city, without a medical school, developed such interest in autopsies that, over a period of 53 months, we have made 657 autopsies with complete records, examined and recorded the histopathologic observations, and promptly correlated the clinical and pathologic observations in a large number of them, as a staff function of our hospitals. This constitutes an autopsy percentage of 15.5 on all deaths in our city for this period, which is over eight times the general average for the United States, and 33.4 percent for all deaths in the three hospitals of the city for the same period, or well over twice the percentage required for standardization.

GEORGE W. COVEY, M.D.

Lincoln, Neb.

†*J. A. M. A.*, Oct. 14, 1933.

Graduating in Health

NEARLY everybody takes a course of instruction in how to keep well, taught by that useful citizen known as the family doctor, but the vast majority of people graduate at the age of one year and never thereafter go near a medical man for professional advice unless compelled to do so by illness or injury or for some such purpose as insurance.

These facts are brought to light in a study of 9,000 families, which showed that about 7 out of each 10 normal infants are examined at intervals by physicians with an eye to preventing illness, but that less than 1 in each 200 people over twenty years of age indulge in this practice.

This may explain in large measure why the illness and death rate among infants and children has been reduced by more than one-half since 1918, while chronic ailments and the mortality rate have actually increased among people in the higher age brackets, beginning at forty.

It is one thing to have available a vast store of scientific medical knowledge, the like of which was never before so much as dreamed of. It is quite another to get people to use this knowledge, which can be expressed only through the skill of the medical profession.

Recent studies have shown that about one out of every three people over 40 years of age is suffering from some form of chronic illness. A very large share of this illness could be prevented, cured or alleviated if the available medical knowledge were utilized to a reasonably satisfactory degree. The way to get this knowledge used to the best advantage and in good season is to follow the example of the baby in having frequent health audits, one a year after the age of twenty.—*Illinois Health Messenger*, July 15, 1934.

CLINCAL MEDICINE AND SURGERY has been my friend through dark hours. I have frequently read articles in it in the morning, and found cases where I could use the practical information the same afternoon.—Dr. R. C. D., Indiana.

CLINCAL MEDICINE AND SURGERY is the best medical journal published!—Dr. J. D. D., Texas.

Competition and Merit

WATCH your competitors. No one man has a monopoly of all the best brains and methods. Let competition be an incentive to your energy and ambition. Give the other fellow a fair, square deal, and beat him on your merits.—WALTER H. COTTINGHAM.

Independent Medical Journals a Necessity

LET us be truthful, even though it may bruise some of us just a little. At any rate we all need a little jar once in a while, as it sort of pulls one out of the slough and urges one on to fight the harder. I, for one, am willing to admit that this socalled depression has awakened inner, latent somethings within me that have proved most helpful during a trying period.

Every medical man who is half awake must realize the great want filled by the independent medical journal. Never was the need more apparent than it is today.

"Why?" you will say. "Do the great national and state journals not fill this want?" My answer is, they do not. Medicine is rife with politics, running a mighty strong second to that of a modern municipality. In fact, some of the tactics used at our conventions would cause a machine politician to blush with envy. In our little world, as in civic affairs, it is not a question of *what* you know, but *whom* you know!

Articles published in the socalled great literary organs, must be read at the annual meetings, unless one has friends in the throne room. However, most physicians are unable to attend these conventions, often held in distant cities, and yet frequently these same absentees have something of inestimable value to impart. Frankly, I have obtained most useful information from journals having but a small list of subscribers.

Another point: I am sure the average physician is not interested in those rare cases, of which he may see but one in a lifetime. What he wants is more information on the old, familiar maladies, such as the common cold, gonorrhea, gastro-enteritis, difficult labors, etc. The independent journal discusses these every-day conditions in a language that he who runs may, not only read, but understand.

At present an attempt is being made to corral the more important of these independent journals and bring them under control of purveyors to the physician, or advertising agencies. This move must not succeed, for if it does, the physician who is not a member of some "inner shrine" will be deprived of the opportunity to present to brother disciples of Aesculapius the fruits of his research. If the death knell of the unofficial organ is sounded, it will be a long step toward the ultimate domination of the medical world by well organized groups, whose names are constantly adorning the pages of our daily newspapers.

New York City. W. S. PUGH, M.D.

They, It or Us*

THE other night I went into the drug store after something and there were a couple of my confreres earnestly bellyaching about things in general going to the demnition bow-wows.

Just as I came up, one of them was saying, "We've been paying our dues into the County Medical Society for fifteen or twenty years and what has it done for us? We certainly need help, if we ever did, and what is it doing to get us out of our troubles?"

"Yeah," the other fellow chimed, "they get up a punk program every month or so and once a year we have a rotten, tiresome dinner and they soak us an extra dollar and a half for that."

By that time, having placed my well-known vituperative tendencies sufficiently under control so I wasn't afraid the town marshal would intervene, I slipped my verbal oar into the conversational waters in this wise:

"What the hell are you roaring about? If you don't like the programs Jim Barlow gets us, why didn't you take the secretary job yourself last year, when they offered it to you, and give us some *good* ones?"

"Oh, I'm too busy," contraduncts the bird who was crabbing about the extra frogskin or so. "I've got no time to mix up in medical politics."

Then I opened up on the other one:

"County Society dues are about three dollars a year, I believe — about what you pay every week or so for a box of cigars. Twenty years of that makes sixty dollars. I heard you weeping your beauteous eyes out the other day because that chiropractor in the next block is cutting in on your business. How come we have a chiropractic law in this state? Know what that up-an-coming young spine-whalloper pays into *his* Society every year in order to make sure that he and his fellows get what they want? *One hundred twenty iron men*, each and every time the seasons march their procession — just twice what you have contributed to 'IT' in twenty years!"

By that time I was warming to my work, so I gave 'em the other barrel.

"It's so long since you two ornaments of the profession have favored the County So-

*Reprinted from *Med. Pocket Quarterly*, Sept., 1931.

ciety with your presence that probably you've forgotten that I'm president of 'IT' this year and have held some office most of the time for the last ten years — not because I want it, God knows, but because *somebody* has to hold the Society together, so that the rest of you can keep your membership in the A. M. A. Neither of you is a Fellow, I believe, because that would cost you seven dollars more. As long as you don't take enough interest in the Society to do anything for 'IT', you'd better keep your traps closed about the things 'They' aren't doing for you." And I walked out.

Thinking this over while I was driving out to take Mrs. Jones a bottle of medicine, I saw a light.

The soft spot in this thing we call "Organized Medicine" is that it isn't *organized.* Seven-eighths of the men who belong to the various "Constituent Societies" are thinking of them as "It" and "They"—*somebody else's society!* If we want to see some of the things happen that we sure do need to see come to pass, we've got to think of these aggregations as US — *our own societies* — and put some of the ginger into their transactions that we spill all over the place when our pocketbooks are touched. It would be money, time and effort well spent; and if we don't we're going to wake up some morning and wish we had.

If you have, among your archives, a bungstarter that is temporarily out of work, please put it into the hands of some lusty boy who can see beyond the end of his nose and let him see if he can wake up some of these bozos that went bye-bye about the time Rip Van Winkle played his famous bowling tournament with the little old Dutchmen of the mountains.

Yours for an anti-hypnotic,

"G. Rouch, M.D."

Contract Practice*

IT is impossible to determine the extent to which the incomes of physicians have fallen to or below the commonly accepted amount necessary for the American standard of living. Sufficient evidence is available to show that, not only have incomes dropped to an unprecedented low point, but the financial insecurity caused thereby has apparently also resulted in a sort of mental panic, and some physicians appear to be willing to embrace almost any scheme which holds out promises of a more definite financial return.

The following statements, therefore, seem justifiable.

1.—Large numbers of physicians are now receiving bare subsistence incomes.

2.—Stress of financial worries operates to distort clear thinking and careful planning on plans for medical care.

3.—Immediate financial relief to the medical profession, in times of general economic depression, is likely to be given more serious consideration than measures for ultimate sound adjustment.

4.—During periods of financial stress, opportunities frequently present themselves to disregard the principles of ethics and, because of the exigencies of the moment, to fall into undesirable and dangerous practices.

Some of the principles which have long predominated in the practice of medicine are stated below. In the interest of the public good and the future of the medical profession, there should be no lowering of standards because of financial stress or temporary expediency. On the contrary, it may be possible that these principles can be strengthened and others of importance may be added.

1.—The welfare of the public is of primary importance. Exploitation of the public for economic advantage and financial gain is inimical to good medical service.

2.—The unity of medical organization must be preserved for the protection of the public welfare and the advancement of medical science.

3.—Free choice of a physician must be guaranteed.

4.—Opposition to unfair competition among physicians must be maintained. Any distribution of medical service which depends on compulsion for its acceptance and use establishes an unfair competition among physicians and introduces a monopolistic control of medical care.

5.—Sacrifice of quality of medical service through the action of commercial competition must not be tolerated.

6.—No form of solicitation or compulsion must be exercised on patients to compel them to enter into any system of medical care. Any deviation from this principle subjects medical qualifications and care unduly to financial considerations.

7.—Full responsibility for the determination of professional qualifications, ethics and adequacy of medical service must be vested in the medical profession.

8.—Compensation for medical care should be adequate to insure competent service.

9.—Preventive or preclinical medicine must not be neglected.

10.—Any change in the method of administering medical care should always be preceded by careful and thorough study by the medical profession. Change is justified only on the premise that the new methods to be adopted are superior to the old which they supplant.

R. G. Leland, M.D.

Chicago, Ill.

*From *Am. Med. Assn. Bul.*, Oct., 1932.

THE SEMINAR

(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Ill.)

Problem No. 7 (Medical)

Presented by Dr. Herman J. Kooiker, Milaca, Minn.

(See CLIN. MED. & SURG., July, 1934, p. 335.)

RECAPITULATION: A woman of 68 years, previously well, had an attack of "influenza," with a very severe cough. This condition persisted for 2 months, when she tired easily and suffered from anorexia, constipation, burning in the esophagus after eating, pain in the epigastrium and vomiting. She lost 25 pounds in weight.

Physical examination showed severe emaciation, with "pot-belly," pasty skin, pale conjunctivae and heavily coated tongue — nothing more of importance. *Gastric analysis* revealed complete achlorhydria, but no lactic acid, Boas-Oppler bacilli nor sarcines.

A roentgenogram showed a doubtful small defect on the greater curvature of the stomach, which organ was in the pelvis but cleared a barium meal in six hours.

The *blood study* was reported: Hemoglobin, 50 percent; red cells, 3,800,000; leukocytes, 5,800; Wassermann reaction, negative.

Requirement: Suggest probable diagnosis and treatment.

Discussion by Dr. John Clark, Longton, Kansas

PROBLEM No. 7 suggests the condition of many patients I see, but there is no clear clew to what is wrong. We shall have to try to find our way without a compass.

The first question arises in connection with the statement that this patient had been entirely well up to November, 1932. What disease could strike like that, out of a clear sky? It seems unreasonable that a woman could live for 68 years without having a significant medical history, if it were properly searched for.

She is rather old for the *beginning* of cancer symptoms, but the pasty skin, easy fatigability, loss of weight and burning in the esophagus suggest malignant disease or tuberculosis.

She had a cough so severe that it caused tenderness of the abdomen, but there is no report of an examination of the respiratory system. Perhaps this cough may have made a serious drain on her powers of resistance, already lowered by senility; and it may have accounted, in part at least, for the vomiting and esophageal soreness, and thus for the loss of weight and strength.

The constipation, ptoses of the abdominal organs and heavily coated tongue suggest something seriously wrong with the digestive system, which requires careful study — more than merely the behavior of a barium meal. We might find a clew here to the secondary anemia (50 percent hemoglobin with a low color index).

Nothing is said about the condition of the heart and the circulatory system; and yet, in a woman of this age, it is scarcely possible that they were not more or less impaired (arteriosclerosis, etc.), and may possibly have been a factor in her illness.

We are rather inclined to neglect the complaints of elderly patients, assuming that they are merely the inescapable results of old age. If we studied such patients as carefully as we do the younger ones it might add to our professional reputations. I feel sure that this woman had been ill for some time prior to November, 1932, but a definite diagnosis can not be made on the basis of this report.

In the beginning, I should have put her to bed and given her a few doses of opium to stop the cough. A daily enema of one pint of cold tap water would probably have cleared out the sluggish and atonic bowel. Then I should have coaxed her appetite and kept both eyes wide open all the time, for further signs to point the way to treatment.

Discussion by Dr. E. C. Junger, Soldier, Ia.

THIS problem seems simple. The abnormality in the position of the patient's stomach has caused poor digestion, with food retention and gastric irritation.

From these conditions an ulcer probably resulted, and there was, no doubt, some bleeding, which initiated the anemia. Then the margin of the ulcer underwent malignant changes, giving rise to more anemia, with cachexia.

Resection of the affected part of the stom-

ach may be indicated, if the liver and lymph glands are not involved. This woman would feel better if part of her dilated stomach were removed, even if it is not cancerous.

The one redeeming feature of the "depression" is that people do less gormandizing, and thus give their stomachs and digestive systems a chance to function in a more normal manner.

Further Notes by Dr. Kooiker

THIS patient showed, of course, gastric atony, with prolapse, and achlorhydria.

Carcinoma must be kept in mind, but as her condition had, in June, 1933, been stationary since February, I think it can be ruled out.

In my opinion, this is a case of abortive pernicious anemia.

This patient passed from under my observation, but in July 1933, I heard that she was doing nicely. Later, however, I learned that she had died in the autumn of 1933, so perhaps the case was carcinoma of the stomach, after all.

Problem No. 9 (Medical)

Presented by Dr. James H. Hutton, Chicago

MRS. B. M., age 26, complained of headaches which began 7 days before and lasted until 7 days after each menstrual period. They first appeared in August 1932. She fainted many times during the preceding summer. There were attacks of tachycardia, during which her pulse reached 130. These attacks came on without obvious reason and appeared to be of the paroxysmal type of tachycardia. Other complaints were: rhinitis in cold damp weather, heat intolerance, free perspiration.

Past history showed mumps, an appendectomy, and carbon monoxide poisoning in April, 1932.

Family history was without significance.

She lived on a general diet and nothing disagreed with her except starches. She had consulted a good many doctors and had been run through the mill of several clinics. Six years ago she had been told that she had an ulcer. Three years later, this diagnosis had been changed to colitis. She had experienced one stormy pregnancy, during which she had had a great deal of nausea and vomiting. At Rochester she had been told, according to her statement, that she had a nervous breakdown or migraine.

Examination: Temperature, 98.0°F.; pulse, 100; height, 5 ft. 5 in.; weight 131½ pounds; blood pressure, 105/60. She was well nourished. Her posture was normal. She had a normal hair suit, except that the pubic hair was of the male type, and there was a rather heavy pituitary type of hair on her head. Eyes, ears, nose and throat were negative. Her tonsils were cleanly out. There were no palpable glands. Her heart was regular, not enlarged and no murmurs could be heard. The lungs were clear. The abdomen was generally tender and of the pituitary type. There was no pathosis in the pelvis. Her reflexes were active and equal. She had said that her basal metabolic rate was minus 11 percent in the summer of 1932. To her disappointment this test was not done at Rochester.

Menstrual periods began at 14. They were irregular at first, with intervals of several months. There was some pain before the pregnancy, but not since. The interval now is 28 days; duration 3 to 4 days. Formerly the flow had persisted for 5 to 6 days and was more profuse than at present.

Blood Chemistry: Non-protein nitrogen, 33.3; uric acid, 2.6; calcium 9.1; sugar 61 (milligrams per 100 cc.) *Blood Count:* Hemoglobin, 80 percent; leukocytes, 6,950; red cells, 4,880,000; lymphocytes, 30 percent; polymorphonuclears, 69 percent; eosinophils, 1 percent. Basal metabolic rate, plus 31 percent. Wassermann reaction, negative.

Five units of pituitrin gave her severe cramps, pallor, numbness and tingling about her mouth and general weakness. One-half (0.5) cc. of antuitrin relieved her nervousness and gave her a feeling of relaxation and drowsiness. Three minims of 1:1,000 epinephrin solution produced marked tremor without increase in pulse rate. Her vital capacity was normal; urine was negative; glucose tolerance was normal.

Requirement: Suggest diagnosis and treatment.

LAZY THINKERS

The basis of our trouble will be found in apathy, indifference, the general disposition to "let the other fellow do it." And this apathy is induced by the altogether too common habit of not thinking for ourselves. The American people, as a whole, are just downright lazy when it comes to thinking. They permit others to do it for them, and these others welcome the job because they have something to put over. Well organized minorities today are, through propaganda, in a measure hypnotizing the people.—COMMITTEE ON AMERICAN EDUCATION.

CLINICAL NOTES and ABSTRACTS

The Parathyroids and Calcium Loss in Hay Fever

LAST week four very acute cases of hay fever came into my office. After the fourth one it occurred to me to test the mineral loss of the body through the kidneys. I did this, with the very surprising result shown in the following table:

	A	B	C	D
Sodium	5	9	2	11
Magnesium	8	5	5	11
Iron	10	7	4	6
Silica	5	10	4	5
Calcium	49	49	47	50
Potassium	9	13	1	12
Phosphorous	7	7	5	12
Iodine	11	24	1	11

The age of patient A was 22 years; of B, 25; of C, 70; and of D, 63. There was a remarkable similarity in the excretion of calcium in all of them, in spite of the difference in their ages.

The first thought after this finding was, of course, "What are the parathyroids doing?" In each instance they were from 60 to 90 percent above normal.

One would naturally expect that the thyroid would be included in this hyper condition, but in only one case (D) was its activity above normal, and that very slightly. The loss of iodine, however, was above normal except in case C, who was a very sick man from other conditions than hay fever. This could easily be accounted for from the nervous state they were in, due to the great loss of calcium. Case B was especially nervous and had never had a well day since early childhood. Not being a specialist in this line, I am at a loss to explain this very acute hyperparathyroidism.

Results from treatment were highly satisfactory to all concerned. Two days of very restricted diet (mostly orange juice) and the exhibition of large doses of calcium, in either colloidal form or a very soluble salt, made them comfortable in 48 hours. No local treatments were applied to the hyper-excited nasopharynx, except a mild mentholated ointment to the external nares three or four times a day and an eye ointment with a mild local anesthetic.

All of these patients have more or less sinus infection. As a rule it is easy to clean this up, but to keep it clean is quite another story. While here, as in any other focus of infection, there is a localized area of alkalosis, the general reaction is one of pronounced acidosis—otherwise, no hay fever.

Liver function tests in each of these cases showed a liver 30 to 50 percent below par, and the first indication is to restore this function. I like the eclectic remedies best for this — eupatorium, podophyllum, and iris — active in the order named. Salts are useless and Epsom salts are positively harmful.

After 48 hours of the orange juice diet they can begin to eat salads and leafy vegetables, keeping on with the orange juice. After a few days of this, if they are fairly comfortable, they can have more to eat, but are to avoid bread, cereals, sweets, pastries, eggs and milk.

For the parathyroids themselves, a non-irritating solution of iodine was painted over them twice daily.

With this regime, in spite of the large doses of calcium, in four days the excessive excretion had lessened nearly 50 percent and, in a week's time, the parathyroids were approaching normal. The eyes were itchy only occasionally. The nasal mucous membrane was still somewhat sensitive, but not uncomfortably so.

Most of these patients are anemic, so, at this stage, they are given an active preparation of iron and phosphorus. They are well pleased, and so am I.

F. A. NORTHRUP, M.D.

Pierre, So. Dak.

Syphilis in Elderly Patients*

A POSITIVE Wassermann reaction, in a man past 50 years old who has no other symptoms, does not mean that he is in a dangerous condition. At the Vanderbilt Clinic, patients over 50 are not given arsphenamine unless it is specifically indicated, and then only in small doses at weekly intervals and under close supervision. Many men of from 65 to 85 years, with a 4-plus Wassermann reaction, who have had little or no treatment, are living active, healthy and useful lives.

In patients between 40 and 50 years, who have a history of syphilis, vigorous efforts should, however, be made to obtain negative

*New York State J. of M., Apr. 1, 1934.

reactions, even though there are no other symptoms, using a course of treatments similar to that employed in younger syphilitic persons.

A. Benson Cannon, M.D.
New York City.

Look for THE LEISURE HOUR among the advertising pages at the back.

Treatment of Hemophilia by Ovarian Extract*

UNTIL recently, pathogenic importance has not been attached to the fact that hemophilia affects males only and that females transmit the disease while appearing free from it themselves. A likely theory is that hemophilia is dependent on a secretion of the ovary. Birch states that, in the normal male, there are always present biologic elements of the female sex and that the female sex hormone can be isolated from the urine of a normal male. Female white rats, on injection with normal male urine, will develop estral bleeding.

I have studied the action of the urine from 5 frank hemophiliacs, whose ages were between 22 months and 40 years. The injection of their urine never produced estrus in the female rat (although urine from normal males did). My results, and those in two other reported cases, confirm Birch's conclusion that the urine of true hemophiliacs is absolutely lacking in the female sex hormone. It has also been observed that the urine of two females who transmitted hemophilia, no longer produced the estral cycle. Birch has used ovarian opotherapy in hemophiliacs with success.

Neihans, from the transplantations of ovaries, with and without the corpus luteum, into two hemophiliac brothers, concludes that the ovary secretes only at certain periods the hormone which is useful in coagulation. The ovarian graft without the corpus luteum caused a drop in coagulation time from five hours to one and a half hours. The graft with the corpus luteum had no effect on the coagulation time. He believes the secretion is suspended during the phase of proliferation and maturation of the follicle, during the phase of secretion with the development of the corpus luteum, and in the phase of uterine hemorrhage, accompaning the rupture of the corpus luteum.

Ovarian opotherapy exerts its effect for a limited time. To obtain permanent or prolonged results in hemophilia, ovarian grafts must be resorted to or injections of ovarian extract must be repeated frequently. Treatment by injection appears to be effective for combating a period of grave spontaneous hemorrhage; also for permitting the sufferer to undergo a surgical operation.

Birch gave daily injections of ovarian extract, over a period of eight months, to a hemophiliac, completely arresting the hemorrhages during that time and for two and a half months thereafter. Another patient received daily injections for a month, after which a piece of ovary was grafted into his abdominal wall, the coagulation time returning to normal for five months. The urine of both patients was absolutely lacking in female sex hormone.

Kimm and Van Allen treated a ten year old child successfully with ovarian extract. In severe hemorrhage in hemophiliacs they recommend an injection of 0.25 gram of ovarian extract as soon as the patient is seen, the dose to be repeated every six hours until the hemorrhage is arrested. Daily injections should then be given until the wound is healed. They have showed that larger doses are no more effective immediately or for a longer period of time. To prepare a hemophiliac for operation, three injections may be given at six-hour intervals. Some authors recommend a daily injection for four days preceding operation and another dose two hours after operation.

Dr. A. Ravina.

*La Presse Médicale, Feb., 1933.

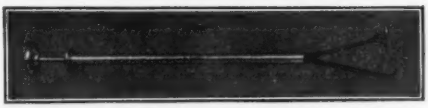
Treatment of Vincent's Stomatitis

CHROMIC acid is harmful to enamel; ultraviolet therapy is of little or no use; vaccine therapy and most proprietary mouth washes are valueless; neoarsphenamine is valuable, when used locally; mild oxidizing agents and castile soap are valuable.

Regarding *general treatment* we conclude: Complete physical examination is necessary, to rule out systemic diseases having oral manifestations. Vitamin-containing foods and fruits should be prescribed. Diet should be studied and balanced. Care must be taken not to upset diets for diabetes and similar diseases, which require strict adherence. Catharisis is indicated. Sleep and general hygiene should be checked up. Most positive cases displayed some systemic factor which, coupled with local factors, produced the lesions; we have seen many cases in scrupulously clean mouths, diagnosed as Vincent's infection, which were oral manifestations of some remote systemic dysfunction. Cases of socalled chronic Vincent's infection have almost invariably been associated with a chronic condition elsewhere in the body.

Our treatment of Vincent's infection includes complete physical examination; treatment based on systemic findings; general health treatment as outlined above; use of a sodium perborate mouth-wash, and castile

soap as a dentifrice locally; removal of local factors as quickly as good judgment permits. FRANCIS H. DALEY, D.M.D., Dental School Tufts College, in *J.A.C.D.*, April, 1934, p. 59.



A New Tonsil Tenaculum

A NEW tonsil tenaculum, devised by Joseph Jerger, M.D., is a departure in principle from those now in use. It possesses advantages over the older types of tenacula. Among these are the ease and security with which it grips the tonsil and the facility with which the snare may be slipped over it.

The new instrument consists of a metal housing incasing a push rod, spring and grip. The grip-points on the two jaws consist of two prongs on one, and three on the other, which interlock when closed. The angle of the prongs is such that they will not pull out at any size of opening.

The grips are held in the housing by the push rod which screws into the lower end of the grips. The compression spring is used to close and to keep a constant pressure on the grips. The instrument is readily taken apart for cleaning.

I have found it invaluable, in that it simplifies the technic of tonsillectomy.

FRANK J. NOVAK, JR., M.D.

Chicago, Ill.

Conservative Treatment of Eclampsia*

FROM the results obtained in a series of 91 consecutive cases of eclampsia, with a maternal mortality rate of 5.4 percent, the following conclusions appear to be justified:

1.—The best results are obtained by controlling the convulsions before any attempt is made to induce labor.

2.—An initial dose of morphine sulphate, ¼ gr. (16 mgm.), should always be given; then 20 cc. of a 10-percent magnesium sulphate solution, intravenously, followed by intramuscular or intravenous injections at hourly intervals to control the convulsions.

3.—Concentrated (25-percent) dextrose solution, intravenously, in 300 cc. injections, is given at eight-hour intervals, to assist in reducing cerebral edema and in maintaining blood volume and also to stimulate diuresis. This must be continued for two days after labor, or, in severe types, after control of convulsions.

4.—Labor is initiated by rupturing the membranes and allowing the amniotic fluid to escape. This method has been successful and has been the least disturbing to the patient.

*J. A. M. A., Dec. 17, 1932.

Defaulted Foreign Securities

THE holders of the bonds and other securities of foreign governments and corporations which have defaulted in the payment of interest or principal or both, may be able to do something about it, now that the matter of commercial treaties is in the hands of the Administration.

Francis P. Garvan, president of the powerful Chemical Foundation, suggests that the holders of such defaulted securities should write or telegraph *at once* to Secretary of State Cordell Hull, protesting vigorously against the arrangement of a tariff agreement or commercial treaty with any nation, whose securities or those of whose citizens are in default, unless such treaty provides for the payment of all defaulted debts to the United States Government and its citizens.

Prompt action, by physicians who have been buncoed out of their savings by the sharp practices of the international moneylenders (who never lost a cent), may, at this time, improve the position of things so that a part of the lost money can be retrieved.

Acetarsone by Mouth in Congenital Syphilis*

THE results obtained in a series of 54 cases warrant the belief that the peroral administration of acetarsone in the treatment of congenital syphilis is the method of choice.

The cooperation of the parents and children was greatly increased by using this method of treatment. Little difficulty was encountered in having the children return reguarly for the medication.

It should be strongly emphasized that the patients being treated with acetarsone should be kept under close observation. Parents should be warned that, at the first sign of a fever, vomiting, diarrhea or a rash, the medication should be immediately discontinued. In this manner, any serious untoward effects can be eliminated.

The daily doses were adapted to the cases and ranged from 0.01 to 1.0 Gm., and the total for one course from 3.0 to over 50.0 Gm. The basis of the doses was: First week, 0.005 Gm. per kilogram of body weight daily; second week, 0.01 Gm.; third week, 0.015 Gm.;

*A. J. Dis. Child., Nov., 1933.

fourth week and subsequent five weeks, 0.02 Gm. A second course was given to 40 patients after an interval of six weeks.

For small infants, the mother was advised to crush the amount of the acetarsone ordered, to dissolve it in water and to give it one-half hour before feeding time. When the dose ordered was large, as for the older child, the instructions were that the medication be divided equally into two or three doses, and that it be given in water one-half hour before meals.

In the 40 patients completing two courses of acetarsone treatment, the Wassermann reaction became negative in 50 percent and the Kahn reaction in 33 percent. The clinical symptoms, general condition and bone lesions improved rapidly and markedly. Only one patient developed arsenical dermatitis.

ALFRED S. TRAISMAN, M.D.

Chicago, Ill.

Three Testicles

(A Case Report)

RECENTLY, in making a general examination of a man 62 years old, I discovered that he has three testicles, of normal and practically equal size. He shows no deformities or other abnormalities of general physical configuration. He has been widowed for about fifteen years, but I would not vouch for his continence during this period.

As I have never encountered a similar condition, nor seen it mentioned in the literature, it occurs to me that it may be so unusual as to be worthy of a report. Perhaps it is as rare as quintuplets.

W. T. JONES, M.D.

Laurel, Delaware.

Endocrine Influence in the Production of Prostatic Hypertrophy*

FROM studies of the hypophyseal-gonad relationship, we may conclude that the anterior pituitary gland activates the interstitial cells of the gonads, which elaborates a hormone that governs the size and function of the prostate and seminal vesicles. It would seem that prostatic enlargement is a physiologic-mechanical effect, due to hyperactivity of the hypophysis and the interstitial cells of the testes.

We have shown experimentally that the results of castration can be obtained by ischemia, that is, by depriving the testicle of its main blood supply. We decided to try this clinically by ligature of the internal spermatic and other arteries supplying the testes. In a limited number of clinical cases we have tried this procedure and a marked diminution in the size of the prostate has been noticed. In rather large, soft glands we may expect very definite reduction in the size by reducing the blood supply to the testes and thereby controlling the endocrine influence.

WM. E. LOWER, M.D., F.A.C.S.

Cleveland, Ohio.

*Am. J. Surg., May, 1933.

Diagram showing factors in the treatment of chronic arthritis.

Treatment of Chronic Arthritis*

THE American Committee for the Control of Rheumatism considers that chronic arthritis is, perhaps, the most important of social and industrial handicaps and looks upon it as a generalized disease with manifestations in the joints.

Properly managed therapy, which takes into account both infections and metabolic factors in its etiology, has yielded results which encourage optimism and impose the obligation of further developing such methods.

The accompanying chart of the general methods and objects of treatment is reproduced from a pamphlet distributed by the Committee at the recent A. M. A. meeting in Cleveland. The complete pamphlet may be procured from the American Medical Association, 535 North Dearborn St., Chicago.

RALPH PEMBERTON, M.D., F.A.C.P.

Philadelphia, Pa.

*Abstract from pamphlet, "Exhibit on Rheumatism."

Skin Grafts†

THE patient himself is the best source of skin grafts. If he is unable to furnish them, the donor of the iso-grafts must be chosen on the basis of blood grouping, the same as for transfusion.

†*Bul. Evanston Br., Chicago M. S.*, May, 1934.

"Split skin" grafts may be cut through the epithelial layers (Thiersch and Ollier grafts) or may include the papillary layer of the corium to furnish the thicker graft of Blair. They are uniformly successful if applied to a clean, healthy, granulating base, with an even, moderately firm pressure, for twenty-four to forty-eight hours, and then exposed to the air.

Free full-thickness grafts must be cut exactly the same size and shape as the defect to be covered; the edges carefully approximated, with the skin under normal tension; immobilized under an even pressure of about 30 mm. of mercury; and the dressing untouched for twelve days.

FERRIS SMITH, M.D.

Grand Rapids, Mich.

Read the Ads. Ask for literature and samples. Mention "C. M. & S."

Selection of Patients for Nasal Ionization in Hay Fever

THE best patients for nasal ionization treatment are those who have no other trouble except seasonal hay fever, or who, if they suffer from bronchospasm (asthma), do so only during the hay fever season.

Every patient should be fully studied by a rhinologist and an internist, and all other abnormalities, including nasal infections, corrected so far as is possible.

The nose must be sufficiently normal, anatomically, to permit the thorough packing which is necessary, without causing undue trauma.

The ionization should preferably be undertaken when the nasal symptoms are as mild as possible; but if necessary, it can be done in the midst of an attack of hay fever.

This procedure can be carried out in the office, but it is a major intervention and should, by no means, be undertaken without due consideration and preparation. The nasal mucosa must be shrunken and anesthetized as if for a surgical operation, and the technic is very exacting.

BURTON HASELTINE, M.D., F.A.C.S.

Chicago, Ill.

Foreign Bodies in the Air or Food Passage*

THE urgency of an esophageal foreign body, broadly speaking, depends on the sharpness of the object swallowed; for the wall of the esophagus is so astonishingly thin and vulnerable that a sharp bone or pin can work its way through the wall in a few hours and may not declare its presence until a week or two later, when a mediastinal abscess or aortic perforation gives a tragic reminder of mortality.

When a partially obstructing foreign body is impacted in the airway, it is unwise to attempt to dislodge it by digital manipulation in the pharynx; such interference may prove fatal by moving the object into a position where it completely blocks the passage.

A type of bronchial foreign body notable for its very acute symptoms and too frequently fatal termination is the organic foreign body, such as a nut or cherry stone; in children particularly, these objects set up an intense and dangerous tracheobronchitis, calling for an immediate bronchoscopy and removal of the foreign body. It is certain that many cases rather hastily diagnosed as pneumonia are due to inhalation of such organic bodies, and equally certain that whooping cough is responsible for a very high proportion of bronchiectasis cases in children, through inhalation of vomited food into the bronchi.

D. A. CROW, M.D.

Brighton, Eng.

*Practitioner (Lond.), Mar., 1933.

Favorite Prescriptions

THE most effective **"grip capsule"** with which I am acquainted has this formula:

℞ Codeine Sulph. ------- gr. ii (0.13)
Acid acetylsalicylic ---- ℥ i (4.00)
Phenyl Salicylat. ------- ℥ ss (2.00)
Acetphenetidin -------- ℥ ss (2.00)
Caffeine Citrat. ------- gr. iv (0.26)
M et ft. capsul. no XVI.
Sig.: One capsule every three hours.

As a general eliminant, I have found nothing better than this:

℞ Sod. et Potass. Tart. ---- ℥ i (30.00)
Sod. Bicarb. ---------- ℥ i (30.00)
Potass. Bitartarat. ------ ℥ i (30.00)
Fl. Ext. Cascara Sagr. (Sweet) ---------- ℥ i (30.00)
Water ---------- quart i (1000.00)
M et Sig.: A wineglass (2 ounces) in 6 ounces of water, before breakfast.

For fever, in infants of from six months to two years, I use:

℞ Tr. Aconit. ---------- M xx (1.32)
Sod. Salicylat. ------- gr. xl (2.65)
Liq. Potass. Citrat. ------ ---------- q. s. ad. ℥ iii (90.00)
M et Sig.: A teaspoonful in half an ounce (a tablespoonful) of water every two hours.

In my opinion, a saturated solution of potassium iodide, given in 10-drop doses in water, after meals, is the most generally useful pre-

scription available. A "taint" of syphilis, regardless of Wassermann reactions, is far more general than most physicians will admit or believe.

THEO. BANGE, M.D.

Cincinnati, Ohio.

Bromidrosis

A saturated solution of picric acid, applied every night to the affected parts, will cure the most obstinate cases of bromidrosis—the kind ninety-nine percent of physicians will fail to cure with other remedies.

H. EDW. BACON, M.D.

Fort Collins, Colo.

Catarrhal Bronchitis

The most effective prescription I know of for catarrhal bronchitis (it has proved to be almost a specific for thirty years) is as follows:

℞ Sod. Bromid. ------gr. xl (2.65)
Vin. Ipecac ----------f ʒ i (4.00)
Codein ----------gr. ii (0.13)
Syr. Tolu. ----------f ʒ ii (60.00)
Liq. Ammon. Acetat.---
----------qs. ad. f ʒ IV (120.00)

M et Sig.: A teaspoonfull every three hours.

EDW. F. HITCHCOCK, M.D.

Bronx, N. Y.

Erysipelas

I obtain good results in cases of erysipelas by injecting, hypodermically, every 12 to 24 hours, 1 cc. of Nuclein solution (Abbott). The effect is almost like that of giving a serum.

This same remedy is helpful in almost all infections, as it increases the number and activity of the leukocytes.

L. S. COLEMAN, M.D.

Millport, Ala.

[Here is the first consignment of "Favorite Prescriptions." We shall be glad to hear from any physician who has a particularly effective formula which he is willing to share with his brother practitioners.—ED.]

The Diagnosis of Glaucoma Simplex*

GLAUCOMA simplex is characterized by its insidious onset; central visual acuity is not affected in the early stages. About 30 percent of these patients come with symptoms of eye-strain, believing that a change of glasses is necessary; others delay until the characteristic triad of symptoms—increased tension, cupping of the disc and changes in the visual field—is well established. It is then, usually, too late to do much for them.

It is possible to make a diagnosis before the patient has become conscious of any reduction of visual acuity, by tonometry and scotometry, in at least 28 percent of the cases. There is no one symptom which can be considered as characteristic, except perhaps the history of gradually failing vision. Analysis of the tension in a large series of cases indicates that the intraocular tension varies much less than any other symptom and tonometry, therefore, would appear at the present time to be one of the most reliable procedures in arriving at an early diagnosis. It is the most important single procedure for early diagnosis. Routine tonometry of patients at the glaucoma age is strongly urged. All the essential symptoms of glaucoma can be accounted for as being the results of increased pressure.

S. B. MARLOW, M.D.

Syracuse, N. Y.

*New York St. J. M., Dec. 15, 1933.

Pyrethrum Allergy*

FROM the evidence of completely tested patients and experiments in passive transfer of reagins it is evident that at least one-half of ragweed-sensitive individuals are sensitive to pyrethrum, which in varying forms has a tremendous consumption and widespread use in the preparation of insecticides. The allergenic substances of ragweed pollen and pyrethrum are closely related. The important, significant and practical fact to bear in mind is that a potential one or two million of ragweed-sensitive people in this country are susceptible to allergic attacks at any time of the year, as the result of exposure to pyrethrum products. This source of allergy is deserving of special emphasis and consideration.

SAMUEL M. FEINBERG, M.D.

Chicago, Ill.

*J. A. M. A., May 12, 1934.

Treatment of Peptic Ulcer with Powdered Okra†

IN A selected group of 17 carefully studied patients with positive evidence of peptic ulcer, the use of powdered okra after a short time relieved the predominating symptoms of pain and gastric discomfort. Dried and hydrated okra powder forms a highly mucilaginous solution in either water or acid. It is used in tablet form, the tablet being chewed up and followed by a drink of water. One-gram tablets are used every 2 hours, and at night only when pain is severe.

The duration of symptoms in these cases varied from 17 years to 6 months; all patients, except one, had had one or more periods of present-day medical or surgical therapy.

†*Illinois M. J.*, Oct., 1933.

Of the 17 patients observed, 14 had immediate relief of symptoms on taking the powdered okra. No other medication was used. Six (6) patients were admitted to hospital for surgical treatment, but in only one case was actual operation necessary. Okra powder is recommended as valuable in the symptomatic relief of peptic ulcer.

J. Meyer, M.D., E. E. Seidmon, M.D., and H. Necheles, M.D.
Chicago, Ill.

The Technic of Phleboclysis

THE term, venoclysis, was first used by Hendon, in 1924, to describe a method for the continuous intravenous administration of physiologically isotonic dextrose solution in large quantities and over long periods of time. Cutting has substituted the etymologically sounder word, "phleboclysis." This type of treatment is now being used so widely that it may be of interest to sketch Hendon's technic, which is still considered perfectly sound, though modifications of it are in process of development.

The essential apparatus is a silver- or gold-plated cannula, preferably of 12-gage size, with a retaining shoulder; two vacuum bottles, of Pyrex glass, suspended on a six-foot holding rack, to act as reservoirs for the solution (two are used so that there will be no interruption of the infusion by stopping to refill one bottle); a "Murphy drip" dropping window, to regulate the flow; heavy, high-grade rubber tubing, with a piece of thinner tubing to fit over the cannula; and the requisite connections, all of Pyrex or Jena glass.

Any convenient vein will do, but the cephalic or basilic vein is best. A tourniquet is applied and the selected vessel is exposed by a horizontal incision; with an aneurism needle, a length of umbilical tape is carried under it and left double; the vein is ligated with catgut, distal to the tape and picked up, proximal to the ligature, with mosquito forceps; a tiny nick, lifting a triangular flap, is made in the vein just distal to the forceps, and through this opening the cannula is inserted, directed proximally, to beyond the shoulder; the two tapes are tied, one above and one below the shoulder.

The cannula, thus secured, is then connected, by means of the piece of light-weight tubing and an irrigating nozzle, to the delivery tube from the reservoirs, and the flow started at a fairly rapid rate, but promptly reduced to 40 drops a minute. When all is working smoothly, the tube is fastened to the forearm, down to the wrist, with circular strips of adhesive plaster, so that its position cannot be disturbed by the patient's movements.

The two reservoirs are connected to the delivery tube by a Y, with a pinch-cock on each arm, so that when the supply of fluid runs low in No. 1, it may be cut off, for refilling, and No. 2 switched in. The solution now most generally used is 5-percent dextrose, to which salt or other substances may be added, as indicated, the water always being *freshly* distilled. The optimum rate of flow is 200 cc. per hour.

The fluid should reach the patient at a temperature of 100°F. (though this is less important than it was formerly believed to be), which means that its temperature in the reservoirs must be kept at from 120° to 130°F., to allow for loss of heat in the tubes.

George B. Lake, M.D.
Waukegan, Ill.

Ovarian Therapy*

THE value of ovarian therapy in various functional disorders of the genitalia is generally recognized. Ovarian dysfunction is undoubtedly an important factor in many cases of amenorrhea, dysmenorrhea and the neuroses of the menopause.

Clinically, my results from the administration of extracts of the whole ovary have been so satisfactory that I have not found it necessary to resort to other products. This has been particularly the case since I replaced the tablets of the desiccated gland by the glycerin extract in pill form. It has been demonstrated that, in the process of defatting and desiccation of the ovaries, much valuable therapeutic material, especially of a lipoid nature, is lost and undesirable substances are formed. On the other hand, by extraction with glycerine, a larger amount of active substance is obtained. In some of my cases it has been found advantageous to supplement the ovarian extract by the glycerine extract of the pituitary gland.

E. F. Bruning, M.D.
Santa Ana, Calif.

Animal Experimentation

IN his Harveian Oration, published in *The Lancet* (Lond.), October 21, 1933, Sir Thomas Lewis, the distinguished cardiologist, remarked:

"A method of studying human disease, advocated since Claude Bernard's time, is first to reproduce such disease in a lower animal and then to proceed to investigate it in that animal. In theory ideal, in practice this is rarely possible of full accomplishment. Strictly speaking, you cannot, by cutting or tying operations, reproduce any human disease other than one arising out of injury. It is possible to produce disease closely akin to that seen in man by introducing into ani-

*M. J. & Record, Mar. 1, 1933.

mals the original agent of the human disease, bacterial or otherwise, or by withdrawing some essential from the diet; but because the animal and its reactions are different, the disease is not accurately reproduced."

This is a sane statement of fact with which we entirely agree. Doubtless the pharmacologist and the physiologist will scoff at Sir Thomas Lewis, but he is a practical clinician. His contentions cannot be denied. We have no hesitation in saying that medical progress is being greatly retarded by many of these absolutely worthless experiments.—*Medical Times*, (Lond.), Feb., 1934.

Treatment of Minor Infections*

A HOSPITAL training in major laparotomies, postoperative care, etc., gives very little experience in the treatment of minor ailments, such as finger infections, infections on the dorsum of the hands, lymphangitis, axillary adenitis, furuncles, carbuncles, paronychia, ingrown toe nail, etc. The importance of such minor surgical practice is often thought lightly of or delegated to others.

The foundation of life-long methods of procedure, invaluable in major surgery, can be laid in the routine care of minor conditions. Habits of diagnosis, weeding non-essential procedures from those that are essential, critical observation of end-results, testing of various methods, can be developed. The patient is awake and sensitive. Gentleness in handling, respect for living tissues, so essential in any surgical operation, can be learnt in out-patient care of minor infections and injuries as well as in the operating amphitheater.

HARRY C. SALTZSTEIN, M.D.

Detroit, Mich.

Diphtheria Toxoid Confers Immunity to Other Diseases

THE immunity against diphtheria conferred by a course of injections of toxoid, is too well known to call for comment.

It has been found, however, that such a course of injections appears to confer a certain degree of immunity to other diseases. In an outbreak of infantile paralysis in Canada, in 1932, two counties where no children were immunized against diphtheria showed an incidence rate for that disease of 46.2 per 1,000 of population; while two other counties in the same province, similarly exposed to the disease but where 85 percent of the children had been immunized, showed a rate of only 11.9 per 1,000.

While there is no evidence of a relation between the organisms causing diphtheria and poliomyelitis, it appears that, when the body has acquired skill in building up resistance to the former, as a result of the toxoid injections, that *skill* can be employed in developing resistance to other diseases.—*Illinois Health Messenger*, July 15, 1934.

*Am. J. Surg., Sept., 1933.

Eclamptic Convulsions*

THE best treatment for eclamptic convulsions seems to be: (1) put the patient in an absolutely quiet room under skilled nursing; (2) anesthetize the patient lightly with chloroform and, while under the anesthetic, put her to bed between blankets, pass a stomach tube and wash out the stomach, leaving in it chloral, 20 gr. (1.30 Gm.) and potassium bromide, 40 gr. (2.60 Gm.); 2 ounces (62 Gm.) of a concentrated solution of magnesium sulphate may also be run in; (3) prevent fits, after this, by hypodermic injection of morphine or by chloral and potassium bromide, if vomiting has ceased; (4) plenty of glucose water with orange or pineapple juice, but no food; (5) as regards delivery, interfere as little as possible but expedite labor, if it has started, by rupturing the membranes, if the cervix is dilating, and by forceps delivery if fully dilated. If labor has not started, do nothing to bring it on.

CHAS. NEWMAN, M.D.

London, Eng.

The advertising pages are part of what you pay for. Use them!

Bronchial Disinfection and Immunization†

STREPTOCOCCI, staphylococci and other pyogenic organisms appear to be of primary etiologic importance in the chronic bronchitides, extensive bronchiectasia and other non-tuberculous suppurative infections of the bronchi and lungs. Spirochetes and pathogenic molds possibly possess primary or secondary importance in some cases.

The possibility of treating such conditions by bronchial lavage has occurred to me and I have investigated the activity of various chemical disinfectants in rabbits. It is possible to give repeated intratracheal injections of various disinfectants with no, or but slight, injury to the bronchi and lungs.

From the results obtained in these experiments, I believe it is entirely likely that lavage of the bronchi of human beings with amounts of 15 cc. of the following solutions for a total of 250 cc., with the last 15 cc. left in for prolonged disinfection, would be with-

*Practitioner (Lond.), Mar., 1933.

†Arch. Int. Med., 51:346, March, 1933.

out injurious effects at the rate of a treatment every two days or twice a week:

Gentian violet	1:2,000	
Acriflavine	1:2,000	(less irritant than Gentian violet)
Merodicein	1:2,000	
Mercurophen or metaphen	1:5,000	
S. T. 37	1:2,000	(equal parts of S.T. 37 solution and saline)
Potassium permanganate	1:500 to 1:1,000	
Mild silver protein	1:20	
Gomenol	1:10	
Chloramine T	1:300	
Neoarsphenamine	1:50	

It seems that bronchial disinfection by lavage would be feasible in the treatment of selected cases of bronchiectasis and other types of suppurative pneumonitis.

JOHN A. KOLMER, M.D.
Philadelphia, Pa.

Diabetes and the Thyroid Glands

ACCORDING to Hoffman, 1933, the records of 1932 show an omnious increase in the diabetes mortality, notwithstanding the wide use of insulin. Diabetes is, in the main, a disease of overnutrition. Drolet says, "The influence of insulin, if any, beyond postponement of the age at which death from diabetes follows, cannot be said to be striking. The death rate from diabetes is particularly heavy among the Jews, who are well known to favor rich food and are inclined toward obesity."

Barnes, 1934,[1] reported to the American Physiological Society that the thyroid, adrenals and pituitary are all related to the development of diabetes. Removal of the pituitary improves experimental diabetes in dogs, and so does subtotal removal of the adrenals. It is thought that the thyroid works through the pituitary. Our own study, 1934,[2] shows that the adrenals and the pituitary, like the thyroid, are storehouses for iodine; and iodine increases the excretion of glycogen from the liver.

Crile, 1933,[3] quotes John, regarding 168 cases in which hyperthyroidism and diabetes were associated, and 55 percent were cured by thyroidectomy. Peptic ulcer also occurred.

Allen, 1932, in reporting on the utilization of blueberry extract (myrtillin) in diabetes, showed that blueberry-leaf tea had long been known as a specific. Blueberries are rich in iodine according to the South Carolina laboratories. Giant blueberries are grown, on Cape Cod, next to cranberries, where the soil is rich in iodine.

Numerous workers have shown that carbohydrate metabolism is speeded up by thyroxin and that glycogen storage is reduced in the liver and muscles by such feeding. The islets of the pancreas increase in number and size after thyroid feeding. (Cameron, 1926; Florentin and Watrin, 1931.[5]) Hendry, 1932,[6] found that thyroid and insulin were valuable in diabetes and hypothyroidism.

Franco Intron, 1933,[7] reported three cases in which endocrine equilibrium was disturbed in diabetes. Blood sugar remained above 300 mgm. per 100 cc. and ketosis was unaltered after extensive insulin treatment. In one case, autopsy showed atrophy of the pancreas and marked hypertrophy of the thyroid, rich in colloid. Intron thinks thyroid hyperfunction was responsible for the state of insulin resistance and persistent ketosis. Two other cases were treated successfully with irradiation of the thyroid and pituitary, respectively.

The Philadelphia Board of Health reports for 1932 show that diabetes is six times greater in frequency in married women; three times greater in widows than in widowers; and two times greater in women than in men. Derangement of the thyroids and other iodine storehouses which regulate glycogen excretion by the liver is much greater in women, and especially so when pregnancy occurs. Rosenbloom, 1921,[8] found that, even in menstruation, the sugar tolerance is lowered.

The Quarterly Bulletin of the New York State Department of Health, June, 1933, indicates that in married or widowed women the death rate from diabetes is double that of married men. Obesity, which is in many cases cured by thyroid preparations, certainly is suggested as a forerunner of diabetes.

Lepine and Parturier, 1924,[9] and Lawrence, 1924,[10] treated hyperthyroidism successfully with insulin. Clinical studies by Dr. Samuel Beale show that insulin regulation of the excessive activity of thyroids may be an important adjunct to cancer treatment.

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F. E. CHIDESTER, A.M., Ph.D.
Ann Arbor, Mich.

THUMBNAIL THERAPEUTICS

Renewal of Epinephrin Effect

THE cardiostimulative effect of epinephrin ceases about 45 minutes after the injection is given, but can be renewed by vigorously massaging the site of injection. This can be repeated one or more times, at intervals of a few minutes, and the effect of the drug can thus be maintained for at least an hour and 15 minutes.—Dr. M. H. Nathanson, in *Arch. Int. Med.*, Mar., 1933.

Colloidal Manganese In Psoriasis

COLLOIDAL Manganese actually possesses the property of exercising an activating effect upon the fermentative oxidation processes in the epidermis and, upon the basis of clinical observations, one cannot doubt that Psorimangan (colloidal manganese solution), given intravenously or intramuscularly, exercises a definite therapeutic effect upon psoriasis, especially those cases in which other methods of treatment have failed.—Dr. L. V. Zumbusch, in *Münch. med. Wchnschr.*, No. 29, 1932.

Relieving Edema with Southey's Tube

MASSIVE edema of the legs, and especially of the scrotum, can be rapidly reduced (to the great relief of the patient) by the insertion of the Southey tube for periods of from three to twenty-four hours, or even longer. Large quantities of fluid can be removed in this way.—Drs. P. D. White and J. P. Monks, of Boston, in *J.A.M.A.*, Nov. 18, 1933.

Pyogenic Infections and Granulopenia

IN granulopenia, an intercurrent pyogenic infection may improve the blood picture. In fact, if I were suffering from this condition, I should be tempted to inject staphylococci subcutaneously, in order to produce pustules.—Dr. Stewart R. Roberts, Atlanta, Ga.

Barbiturates in Cardiac Asthma

THE administration of sedatives, particularly in the evening, often prevents attacks of cardiac asthma. Luminal (phenobarbital) in ½ grain (0. 1 Gm.) doses (or other barbituric acid derivatives, in appropriate doses), alone or combined with 1/2 grain (32 mgm.) of codeine, is decidedly helpful.—Drs. Soma Weiss and G. P. Robb, in *Med. Clin. No. Am.*, Jan., 1933.

Liver Extract in Agranulocytic Angina

A PATIENT with agranulocytic angina conforming to the Schultz criteria, recovered following treatment by intravenous injections of solution of liver extract. One ampoule of extract (diluted with sterile, freshly-distilled water to a total volume of 15 cc. and injected at the rate of 3 cc. per minute) was injected on each of seven consecutive days.—Dr. F. L. Foran, of Chicago, in *Illinois M.J.*, June, 1932.

Calcium in Heart Disease

CALCIUM as a remedy in heart affections, either alone or in conjunction with other remedies, is attracting more and more attention throughout the world. It is gradually becoming recognized as worthy of a place in the modern cardiologists' armamentarium.—Dr. Ed. Podolsky, of Brooklyn, in *M. J. & Record*, Mar. 2, 1932.

Widening Scope of Oxygen Therapy in Disease

OXYGEN therapy appears to be of value in acute pulmonary disease when an abrupt disturbance of function, in respect to the absorption of oxygen, has taken place. This includes lobar and bronchopneumonia, postoperative atelectasis of the lungs and atelectasis of the newborn. In addition, various types of acute and chronic cardiac failure appear to respond favorably to the inhalation of a high concentration of oxygen. Patients with chronic pulmonary fibrosis have improved by long-continued residence in oxygen chambers. In cases of asphyxia, such as carbon monoxide poisoning and morphine poisoning, the inhalation of oxygen, particularly when combined with carbon dioxide, is of great benefit.—Dr. A. L. Barach, of New York, in *Anesth. & Analg.*, Mar.-Apr., 1932.

Strychnine Poisoning

IN a case of strychnine poisoning the immediate treatment was a 5-grain (0.3 Gm.) ampule of phenobarbital, hypodermically. Next the patient was given a 5-grain ampule of phenobarbital sodium by vein, but without complete relief. Then a 15-grain (1 Gm.) am-

pule of Sodium Amytal, dissolved in 10 cc. of water, was administered intravenously, 1 cc. per minute. After 10 minutes the patient was snoring and made an early recovery.

The results in this one case were so dramatic that, in future cases, phenobarbital sodium and Sodium Amytal, intravenously, as antidotes for strychnine poisoning, should at least be tried.—Dr. M. C. Wheelock, of Sioux City, Iowa, in *J. A. M. A.*, Nov. 26, 1932.

Scaleniotomy in Apical Tuberculosis

SCALENIOTOMY is the division, under local anesthesia, of the fibers of the three (sometimes four) scalenus muscles of the deep cervical group, as near as possible to their insertions into the first and second ribs, thus decreasing the motility of the upper chest. It is used to give rest to the lung apices, in apical tuberculosis, in the same way that phrenic exeresis rests the lung bases, and has given promising results in a number of suitable cases.—Dr. Meade Clyne, in *Am. Rev. of Tuberc.*, Dec., 1932.

Pruritus Ani

OUR experience with pruritus ani leads us to believe that its cause is bacterial (*Streptococcus fecalis* and *Staphylococcus albus*) and mechanical (lesions of the rectal mucous membrane). Treatment should be applied to both these factors, by clearing up the rectal abnormalities surgically, using local anesthesia with 2-percent procaine, and by the subcutaneous injection of autogenous vaccines twice a week, beginning with 0.1 or 0.2 cc. and gradually increasing until reaction doses are given twice weekly.—Drs. A. Bassler and R. J. Connors, in *M. J. & Rec.*, Sept. 6, 1933.

Goiter Operations

EXOPHTHALMIC goiter is never an emergency condition, and therefore all patients should be thoroughly and adequately prepared before doing a thyroidectomy.—Dr. Arnold S. Jackson, Madison, Wis., before *A. M. A.*, June 14, 1933.

Duodenal Tube in Acute Hemorrhages of Peptic Ulcer

FOR the past twenty-one years, I have been using duodenal alimentation in the treatment of peptic ulcers, and have given the tube frequently, soon (6 to 12 hours) after a hemorrhage. I have seen no harm to the patient, but a great deal of good. In urgent cases I have introduced the tube immediately after a hemorrhage, without detriment to the patient. The use of the tube obviates blood transfusions.—Dr. Max Einhorn, of New York, in *M. J. & Record*, Mar. 2, 1932.

Megacolon and Hirschsprung's Disease

MEGACOLON and Hirschsprung's disease can be cured by *sympathectomy*, removing both lumbar and the presacral chains and all the ganglia and fibers on both sides of the bifurcation of the aorta and below it; sometimes also the hypogastric plexus. One death occurs in 15 cases and results are satisfactory, if the patients are carefully handled for six months after operation.—Dr. Alfred W. Adson, Rochester, Minn.

Laryngeal Obstruction

IF the supraclavicular spaces are retracted, obstruction is present above that point (in the larynx or trachea), and tracheotomy should be done at once, to give the patient air.—Dr. Fielding O. Lewis, Philadelphia, Pa.

Alcohol in High Blood Pressure

HIGH blood pressure is often due to irritability of the sympathetic nervous system, and in such cases the strain and drive of life may be reduced by the leisurely, noncompetitive consumption of moderate quantities of alcohol.—Dr. George E. Brown, Rochester, Minn.

Prophylaxis of Impetigo Neonatorum

THE following is a brief outline of the technic which has practically eliminated impetigo neonatorum from the Elizabeth Steel Magee Hospital, Pittsburgh, since 1930, with no untoward effects:

A.—*Delivery Room*—1. As soon as possible after birth, babies are cleansed thoroughly with sterile liquid petrolatum.

2.—Each baby is thoroughly rubbed, from the top of the head to the soles of the feet, with 2-percent ointment of ammoniated mercury before it leaves the delivery room.

B.—*Nursery*—1. Daily cleansing is accomplished with sterile cottonseed oil.

2.—The buttocks and anus are cleansed with cotton balls and cottonseed oil.

3.—Soap and water and powder are not used.

W. H. Guy, M.D., and F. M. Jacob, M.D.
Pittsburgh, Pa.

Stability of Ether

U. S. P. ether in metal cans, as supplied by reliable manufacturers, does not deteriorate rapidly, under ordinary conditions, after the metal containers are opened. The can may be opened and again stoppered with a cork many times, during a period of weeks, without detectable oxidation.

There is no evidence that ether specially purified "for anesthesia" has any material advantage over ordinary U.S.P. ether for anesthetic purposes.—Harry Gold, M.D., in *J. A. M. A.*, March 17, 1934.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE AND SURGERY, Medical & Dental Arts Bldg., Waukegan, Ill., is accompanied by a check for the published price of the book.

Except a living man, there is nothing more wonderful than a book.—KINGSLEY.

Evans: Chronic and Familial Syphilis

ESSAYS ON CHRONIC AND FAMILIAL SYPHILIS. *By Griffith Evans, M.A., D.M. (Oxon), F.R.C.S., Hon. Surgeon, Caernarvonshire and Anglesey Infirmary. Baltimore: William Wood & Company. 1934. Price $3.00.*

A small volume of brief essays, including several awarded the gold medal of The Hunterian Society. The author is concerned with those clinical manifestations of syphilitic conditions in which typical treponemas are not necessarily found and the Wassermann reaction is rarely positive—states probably resulting from the presence of the granular virus, which McDonagh discussed so fully in the first volume of "The Nature of Disease" and which is now coming to be fairly generally recognized.

The author has been acting for years on his belief in the transmissibility of syphilis to the third generation and cites cases. The chapters include: Chronic Syphilis; Some Clinical Features; Syphilis and Nervous Dyspepsia; Endosyphilis as a Cause of the Chronic Abdomen; Abdominal Adhesions in Latent Syphilis; Notes on Nervous Dysphagia; Anemia, Glossitis, and Dysphagia; On Certain Types of Tongues and Their Relation to Syphilis; Cancer and Syphilis.

The clinical importance and value of this little book are out of all proportion to its size. The case histories and illustrations, alone, are worth more than the price of it. It is not too much to say that any general practitioner who will study it and apply its teachings regularly will be able to increase his professional successes (and, thereby, his practice) from 25 to 50 percent, or even more.

Hertzler and Chesky: Surgery

SURGERY OF A GENERAL PRACTICE. *By Arthur E. Hertzler, M.D., and Victor E. Chesky, M.D., Chief Resident Surgeon, Halstead Hospital. With 472 Illustrations. St. Louis, Mo.: The C. V. Mosby Company. 1934. Price $10.00.*

The authors have prepared one of the most practical books ever devoted to the general practice of surgery. It is particularly valuable because it is written for the general practitioner. In addition to presenting a treatise on surgery, the authors have written with the idea of helping to keep down the costs of medical care and thus to decrease the trend toward State Medicine. They have undertaken to help the practitioner serve the patient efficiently, inexpensively and quickly. They remind us that, when the general practitioner cared for the ailing public, there was no complaint about the high cost of medical care. That reminder is timely.

The book is divided into three sections: Part I, Special Surgery; Part II, Regional Surgery; Part III, General Surgical Therapeutics. Consideration is given to hemorrhage, all types of wounds, surgical infections, injuries, and to surgical diseases of all parts of the body. One long chapter is devoted to bandaging; another to general therapeutic measures.

This book can be recommended as a necessary addition to every general practitioner's library, and its study ought to increase every reader's economic, as well as professional, standing.

Hollis: Breakdown of Money

THE BREAKDOWN OF MONEY, An Historical Explanation. *By Christopher Hollis. New York: Sheed and Ward Inc. 1934. Price $1.50.*

Histories so frequently show signs of personal bias in their writers that we have come to accept that condition as practically inevitable. But there is one type of omission which is so nearly universal that it is hard to escape the conclusion that it was made by order or by deliberate design. Practically no historian speaks of the financial pressures which have molded the destiny of nations; and yet the House of Rothschild has had intimate relations with every important historical personage, from the time of Bismark, Metternich and Cavour to the present.

Here comes a man who shows us how and why money has made history, and how and why the relatively few men who control huge sums of money, control thereby the histories of states and peoples.

There never was a time when the world's productive capacity was so great as it is now. Why, then, are thousands of people starving and millions deprived of the common comforts? Where does money come from and who controls its movements? Why did we have to go through a "depression"?

In this volume these questions are answered, and many more, starting with the simplest ones that a person untrained in

economics might ask and carrying the discussions to common-sense conclusions. It is a handbook of money for the ordinary man, so clearly written that any one of ordinary intelligence can understand it.

In many respects it resembles Crowther's book, "America Self-Contained," which was reviewed in these columns in January, 1934, except that it is written from the British standpoint. The conclusion is the same — the only way of escape from the clutches of the international financiers is by the abolishment or strict limitation of foreign commerce and the direct control of all fiduciary matters by governments, for the benefit of all, rather than by individuals, for their own profits.

Here are a few quotations:

"Economic nationalism, while it spells prosperity for the nations, spells death for the great business of international lending."

"Both inflation and deflation are forms of taxation. If there is no popular control of inflation and deflation, there is no popular government."

"The power of finance depends upon its ability to persuade people that they live in an age of scarcity."

"Whatever the risks, we must go forward. The cry of the poor does not permit us to tolerate any longer the monstrous empire of money-lending which has risen step by step with the decline of Christian faith, the evil insolence of rich men enjoying power just because they are rich."

Those who want to know how banks can lend — and collect interest upon — money which they never had, and sell shaky or worthless securities without taking any risk will find the answers here. No one can vote intelligently without knowing something about these things; and none who aspires to be a worthy citizen should delay in acquiring this knowledge, which has only recently been made readily available.

Griffith and Mitchell: Diseases of Children

THE DISEASES OF INFANTS AND CHILDREN. *By J. P. Crozer Griffith, M. D., Ph. D., Emeritus Professor of Pediatrics in the University of Pennsylvania; Consulting Physician to the Children's Hospital, Philadelphia; and A. Graeme Mitchell, M. D., B. K., Rachford Professor of Pediatrics, College of Medicine, University of Cincinnati; Medical Director and Chief of Staff of the Children's Hospital of Cincinnati. Philadelphia and London: W. B. Saunders Company. 1934. Price $10.00.*

This book, the third edition of "Diseases of Infants and Children," has been prepared with two purposes in view: First, as a textbook for medical students; and second, as a reference book for physicians especially interested in pediatric subjects and literature. It is a condensed, but fully adequate, one-volume version of the former treatise on the same subject by the authors—the result of requests from pediatricians and other practitioners in many parts of the country.

The book's 1127 pages of text are divided into a consideration of: (I) General Subjects and (II) Diseases. Under Diseases are twelve sections on subjects ranging from Diseases of the New Born and Infectious Diseases through diseases of all the body systems. It is a fully thorough and satisfactory work, both for study and reference. Recent pediatric literature has been combed to bring the subject matter up to date.

Wright: Applied Physiology

APPLIED PHYSIOLOGY. *By Samson Wright, M.D., F.R.C.P., John Astor Professor of Physiology, University of London, Middlesex Hospital Medical School; Examiner in Physiology to the University of Oxford and the Royal College of Surgeons of England. Fifth edition. New York: Oxford University Press. 1934. Price $5.50.*

The fifth edition of this Oxford Medical Publication has been thoroughly revised to keep it abreast of current developments in physiology. Some of the subject matter has been rearranged, and some of the sections have been extensively rewritten or added to, the whole material being so presented as to distinguish those parts of clinical interest from those of pure physiology — a point of considerable value to the student. There are 195 illustrations.

The book is compact, yet well written. The subject matter is so presented as to impress on the reader that the subject of applied physiology must be considered as a coordinated and integrated whole.

Pemberton and Osgood: Chronic Arthritis

THE MEDICAL AND ORTHOPEDIC MANAGEMENT OF CHRONIC ARTHRITIS. *By Ralph Pemberton, M.S., M.D., F.A.C.P., Professor of Medicine, Graduate School of Medicine, University of Pennsylvania; Chairman, American Committee for the Control of Rheumatism; and Robert B. Osgood, A.B., M.D., F.A.C.S., John Ball and Buckminster Brown Professor Emeritus of Orthopedic Surgery, Harvard Medical School; Member, American Committee for the Control of Rheumatism. New York: The Macmillan Company. 1934. Price $5.00.*

This book has been written because of the convictions of the authors that chronic arthritis is largely a preventable and curable disease, and that current knowledge of the nature of the disease and of the measures necessary to combat it is not so generally diffused throughout the medical profession as it should be. It is intended as a practical exposition of the subject of chronic arthritis for two branches of the profession, namely: general practitioners (including internists) and orthopedic surgeons.

The general point of view maintained in this work toward the arthritic problem as a whole is in nearly complete conformity to the "Concept of Arthritis" and the "Primer" on arthritis, issued by the American Committee for the Control of Rheumatism. Cer-

tain personal beliefs of the authors have been unhesitatingly developed. No attempt has been made to discuss other conditions possibly related to the main problem, such as acute rheumatic fever, Paget's disease, etc., for the reason that chronic arthritis greatly overshadows these in sociologic and medical importance, and constitutes, alone, a major chapter of medicine.

The general inadequacy of therapy in arthritis has been due, for the most part, to lack of interest by the profession, and hence to lack of knowledge concerning it. The authors offer their opinions and recommendations from several years of intensive and sustained interest in the disease. The book is well written, direct and interesting, and should be read by every practitioner. Study of its subject matter is necessary if chronic arthritis is to be treated adequately.

Vaughan: The Anemias

THE ANEMIAS. *By Janet M. Vaughan, D.M. (Oxon.), M.R.C.P. (Lond.), Beit Memorial Fellow, The Bernhard Baron Institute of Pathology, the London Hospital; Late Assistant Clinical Pathologist, University College Hospital; Assistant Clinical Pathologist, the Royal Northern Hospital; Rockefeller Traveling Fellow, the Thorndyke Memorial Laboratory, Boston City Hospital, Boston, U. S. A. With Notes on Normal and Pathological Erythropoiesis, by Herbert M. Turnbull, D.M. (Oxon.), F.R.C.P. (Lond.), Director of the Bernhard Baron Institute of the London Hospital. Oxford University Press, London; Humphrey Milford. 1934. Price $4.00.*

Hematology has advanced more rapidly in the past ten years than almost any other branch of medicine. Current hematologic literature is so extensive that it is increasingly difficult for any one but a specialist to keep up to date. This book reviews the present information available on the anemias. It is necessarily incomplete, because present knowledge is incomplete, but it is a commendable work in that it reviews the field adequately and records the information that is available. Its 220 pages of text are divided into ten chapters, in which Hematology is considered from the standpoint of normal blood, deficiency anemias, toxic anemias, post-hemorrhagic anemias, hemolytic anemias, and unclassified anemias. There are twenty-four illustrations. The volume is designed for students and all practitioners who are interested in the general subject of hematology.

Platt: Nephritis

NEPHRITIS AND ALLIED DISEASES, Their Pathogeny and Treatment. *By Robert M. Platt, M. D. (Sheff.), M. R. C. P. (Lond.), Physician, Royal Infirmary, Sheffield; Visiting Physician, Montagu Hospital, Mexborough. Oxford University Press, London: Humphrey Milford, 1934. Price $2.75.*

The object of this book is to present briefly what the author has found of most practical value in our knowledge of Bright's Disease. It is not intended as a first introduction to the physiology or pathology of the kidney, but rather for the senior student or practitioner, who is assumed to have a certain familiarity with the clinical conditions of edema, high blood pressure, albuminuria and the like, and to have seen cases of nephritis in the hospital wards or in private practice. The volume (an Oxford Medical Publication) simplifies the subject of nephritis as much as possible, yet covers it adequately. It contains 160 pages of text and eight illustrations. It is well written and easily readable.

Untereiner: Taxes

THE TAX RACKET. What We Pay to Be Governed. *By Ray E. Untereiner, J.D., Ph.D., Assistant Professor of Economics, California Institute of Technology, Member of the California Bar. Philadelphia & London: J. B. Lippincott Company. 1933. Price $1.00.*

More people are thinking about taxes than ever before, but there are still too many who do not realize that they are being taxed, and therefore do not watch the various governments they are supporting sufficiently closely. Before the War, every citizen contributed 25 days' wages to the governments every year; in 1932 he turned in 61 days' wages; now and henceforth it will be worse than that.

Here is a book that will explain, as simply as is practicable, why and how taxes are levied, so that the tax-conscious citizen can form some intelligent idea of what it costs him to be governed. When he learns how much of the taxes he pays are straight political rackets, he can decide for himself whether the things he is getting for his tax money are worth what they cost. If not, it is up to *him* to do something about it, because unjustifiable taxation is continued only because of the lethargy of the taxpayers.

These pages are not easy reading, but they contain much that every man who can use his mind (and the same kind of women also) ought to know about. It is to be hoped that a great many of that kind will read it before election day, and then *act upon the information so obtained.*

Wilder: Diabetic Primer

A PRIMER FOR DIABETIC PATIENTS. A Brief Outline of the Treatment of Diabetes with Diet and Insulin, Including Directions and Charts for the Use of Physicians in Planning Diet Prescriptions. *By Russell M. Wilder, M. D., Professor and Chief of the Department of Medicine of the Mayo Foundation, University of Minnesota; Head of Section on General Metabolism, Division of Medicine, the Mayo Clinic. Fifth Edition, Reset. Philadelphia and London: W. B. Saunders Company. 1934. Price $1.75.*

The Primer, from its first edition (which appeared in 1921), has been intended to be a guide for both patient and physician. This (the fifth) edition contains simplified instructions for the use of insulin and for the planning of diets to meet all nutritional needs. The book is written in non-technical language, with medical terminology largely omitted, nevertheless the assistance of a physician will be required for its proper inter-

pretation. It is addressed, as before, not to the solitary patient, but to the patient who is working out a life complicated with diabetes, under the guidance of his family doctor. Physicians can recommend this Primer to patients, with assurance that it is a satisfactory handbook and guide.

Eyster: Venous Pressure

THE CLINICAL ASPECTS OF VENOUS PRESSURE. *By J. A. E. Eyster, B.Sc., M.D., Professor of Physiology, University of Wisconsin; Associate Physician, Wisconsin General Hospital, Madison, Wis. New York: The Macmillan Company. 1929. Price, $2.50.*

All physicians now make records of the arterial blood pressure in practically all cases; but studies of the venous pressure are rarely made, although they are of very great importance in all cases of heart disease and some other conditions.

The author of this monograph has set forth all that the clinician needs to know about the estimation of venous pressure—including an illustration and description of the apparatus required, which looks much like an ordinary sphygmomanometer—and has outlined the indications for such studies and the significance of the findings recorded, as briefly and directly as is consistent with clarity.

Every physician who treats cardiac patients (and that means most clinicians) should promptly familiarize himself with the information contained in this volume and prepare himself to make and interpret venous pressure studies.

This is one of the beautifully made and highly practical Macmillan Monographs, mentioned in our story of the meeting of the American College of Physicians, on page 263 of the June, 1934, issue of this journal.

Medical Clinics

THE MEDICAL CLINICS OF NORTH AMERICA. Chicago Number. *Volume 17, Number 6, May 1934. Philadelphia and London: W. B. Saunders Company. Issued serially, one number every other month. Per clinic year, July 1933 to May 1934. Price: Paper $12; cloth $16.*

The May, 1934, number of the "Medical Clinics" consists of twenty-four papers, contributed by twenty-five of the leading physicians of the medical schools and hospitals of Chicago. Twelve of the papers are records of clinics given at St. Luke's Hospital. Five papers of particular interest are: (1) Toxic Effect of Hair Dye on Eyes and Skin, by Dr. Frank Brawley; (2) Infant Nutrition: Back to First Principles, by Dr. Jesse R. Gerstley; (3) Diet in the Management of Nephrosis, by Dr. Clifford J. Barborka; (4) Neutropenia, "Agranulocytic Angina," Report of Cases and Treatment, by Dr. Lowell T. Coggeshall; (5) Toxic Necrosis of the Liver Due to Cinchophen: Report of Five Cases, by Dr. Henry T. Ricketts. The entire number is of unusual practical interest and value.

Bett: Common Diseases

A SHORT HISTORY OF SOME COMMON DISEASES. *By Divers Authors, edited by W. R. Bett, M.R.C.S. (Eng.), L.R.C.P. (Lond.), Late Resident Medical Officer, Princess Elizabeth of York Hospital for Children, Shadwell, E.; Fellow and Late Hon. Secretary, Section of History of Medicine, Royal Society of Medicine; Fellow, Medical Society of London; Member and Hon. Secretary, Section of History of Medicine, Centenary Meeting, British Medical Association. Oxford University Press, London: Humphrey Milford, 1934. Price, $3.50.*

This book is an original venture in medical literature and is intended mainly for students and practitioners of medicine. The contents are divided into sixteen chapters: (1) Acute Infectious Diseases; (2) Tuberculosis; (3) Venereal Diseases; (4) Pneumonia; (5) Rheumatism; (6) Rickets; (7) Endocrine Disorders; (8) Bright's Disease; (9) Heart Disease; (10) Epilepsy; (11) Arthritis; (12) Gall-Stones; (13) Tonsils and Adenoids; (14) Appendicitis; (15) Malignant Disease; (16) Malingering. The history of these diseases is decidedly interesting, and can be read with profit and pleasure by all whose literary tastes run in this direction.

Baur, Fischer and Lenz: Heredity

HUMAN HEREDITY. *By Erwin Baur, M.D., Professor of Heredity at the Agricultural Academy in Berlin; Eugen Fischer, M.D., Professor of Anatomy and Director of the Anatomical Institute at the University of Freibrugin Breisgau; and Fritz Lenz, M.D., Professor of Racial Hygiene at the University of Munich. Translated by Eden and Cedar Paul. New York: The Macmillan Company. 1931. Price $8.00.*

This is an exhaustively scientific and decidedly technical treatise on heredity, the new (third) edition bringing the subject as near up to date as is practicable and covering the ground very fully. It includes a considerable bibliography and index, partly in German, and will prove a valuable reference book for students of genetics, anthropology and kindred sciences and for physicians who are especially interested in these subjects.

Surgical Clinics

SURGICAL CLINICS OF NORTH AMERICA. Mayo Clinic Number. *Volume 14, Number 3, June 1934. Philadelphia and London: W. B. Saunders Company. Issued serially, one number every other month. Per clinic year, February 1934 to December 1934. Prices: Paper $12; cloth $16, net.*

The June, 1934, number of the "Surgical Clinics" consists of twenty-eight papers, contributed by thirty-seven members of the Mayo Clinic. Several of the papers consider a number of different subjects. The subjects discussed are quite diverse, touching in general on the entire field of surgery. It is one of the best numbers of the year and will help to add new names to the list of subscribers to this outstanding publication.

MEDICAL NEWS

Portrait of a Young Woman

THIS attractive young woman, fully clothed, stood up before an x-ray machine in the laboratory of the Eastman Kodak Company, and posed for a full-length portrait, life size, which was taken in one second on the largest film ever used in making a roentgenogram (32 x 72 inches). The mass in her pelvis is her dislocated stomach and colon, visualized by a barium meal.

It seems probable that these whole-body roentgenograms (which can be taken in most x-ray laboratories) will be clinically useful in studying the effects of posture, multiple injuries and malignant metastases, generalized diseases of the bones, etc., as well as for the teaching of vital anatomy on the living body.

Medico-Military Symposium

THE 1934 medico-military symposium for Medical Department Reserve Officers of the Army and Navy will be held at the Mayo Clinic, Rochester, Minn., October 7 to 20, inclusive. The morning hours will be devoted to clinics on subjects selected by the student officers, and the afternoons and evenings to medico-military instruction. Students will defray their own traveling and living expenses. There are no fees to pay. Credit of 200 hours will be given to those officers who complete the course. Uniforms are optional.

Application for this course should be made to the Corps Area Surgeon, 7th Corps Area, Omaha, Nebr., or to the District Medical Officer, 9th Naval Dist., Great Lakes, Ill., stating the character of the professional work the candidate desires to pursue.

Postgraduate Course

THE seventh annual graduate fortnight of the New York Academy of Medicine will run from October 22 to November 2, inclusive, 1934, and will be devoted to diseases of the gastrointestinal tract. There will be afternoon clinics, evening meetings and a small scientific exhibit. A complete program and registration blank will be mailed by the Academy (2 East 103rd. St., New York City) on request.

Poliomyelitis Vaccine

INFANTILE paralysis is one of the most dreaded of diseases (and rightly so), but the days of its devastations are numbered, if the information in *The Literary Digest* for July 21, 1934, is correct.

The story goes that Dr. Maurice Brodie, of New York University, working in the Bureau of Laboratories of New York City, has produced an anti-poliomyelitis vaccine made from the spinal cords of monkeys (as anti-rabies vaccine is made from the cords of rabbits), which produces immunity in more than 75 percent of protected monkeys —the only laboratory animals known to be susceptible to the disease. Experiments on human beings are now in progress.

It seems that Dr. John A. Kolmer, of Philadelphia, is also working on another promising vaccine against infantile paralysis.